IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

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|---|---|---|
| IN RE: REMBRANDT TECHNOLOGIES, LP PATENT LITIGATION | : | |
| MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC., THOMSON, INC., AMBIT MICROSYSTEMS, INC., and NETGEAR, INC., | : | Civil Action |
| Plaintiffs, | : | |
| v. | : | |
| REMBRANDT TECHNOLOGIES, LP, REMBRANDT TECHNOLOGIES, LLC, d/b/a REMSTREAM, | : | No. 07-752-GMS |
| Defendants. | : | |

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|---|---|---|
| REMBRANDT TECHNOLOGIES, LP, and REMBRANDT TECHNOLOGIES, LLC, d/b/a REMSTREAM, | : | |
| Counter-Plaintiffs, | : | |
| v. | : | |
| MOTOROLA, INC., CISCO SYSTEMS, INC., SCIENTIFIC-ATLANTIA, INC., ARRIS GROUP, INC., | : | |

(Caption Continues on Page 2)

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Wilmington, Delaware

Thursday, August 7, 2008

9:10 a.m.

- - -

BEFORE: HONORABLE GREGORY M. SLEET, Chief Judge

THOMSON, INC., AMBIT MICROSYSTEMS, INC., NETGEAR, INC., TIME WARNER CABLE LLC, TIME WARNER NY CABLE LLC, TIME WARNER ENTERTAINMENT-ADVANCE/NEWHOUSE PARTNERSHIP, TIME WARNER ENTERTAINMENT COMPANY, LP, COMCAST CORPORATION, COMCAST CABLE COMMUNICATIONS, LLC, COXCOM, INC., CSC HOLDINGS, INC., CABLEVISION SYSTEMS CORPORATION, ADELPHIA COMMUNICATIONS CORPORATION, CENTURI-TCI CALIFORNIA COMMUNICATIONS, LP, CENTURY-TCI HOLDINGS, LLC, COMCAST OF FLORIDA/PENNSYLVANIA, L.P.(f/k/a PARNASSOS, LP), ADELPHIA CONSOLIDATION, LLC, PARNASSOS HOLDINGS, LLC, WESTERN NY CABLEVISION, LP, SHARP CORPORATION and SHARP ELECTRONICS CORPORATION,

Counter-Defendants.

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:38:15 **THE COURT: Good morning, counsel. Please be seated. And since we have a new lineup, at least in part...**

:38:21 **Mr. Seitz.**

:38:22 **MR. SEITZ: Good morning, Your Honor. I am going introduce my colleague John Sweeney from the Morgan & Finnegan firm. I know you are familiar with him. He is going to introduce his colleagues.**

:38:33 **MR. SWEENEY: We have James Hwa, Siegrun Kolmykov, Adam Rodriguez, and Zack Silbersher.**

:38:42 **THE COURT: Ms. Jacobs Louden.**

:38:45 **MS. JACOBS LOUDEN: Good morning, Your Honor. Karen Jacobs Louden from Morris Nichols, one of the co-liaison counsel. We have present today from the Weil Gotshal firm Ed Reines and Tim DeMasi. And from the Kaye Scholer firm we have Dave Benyacar and Dave Reisner.**

:39:03 **THE COURT: Good morning. Does the same process**

:39:06 **obtain today?**

:39:06 **MR. SWEENEY: Yes, Your Honor. We have just one**
:39:08 **patent today, so I thought I would begin with sort of the**
:39:12 **technical background, and then go right into the claim**
:39:14 **terms.**

:39:15 **THE COURT: Sounds good, Mr. Sweeney.**

:39:22 **MR. SWEENEY: We do have a book of the exhibits.**

:39:24 **THE COURT: That's great. Just hand them up to**
:39:27 **my law clerk. I should actually refer to her by name. She**
:39:38 **is not a potted plant. She is Ms. Nerozzi.**

:39:41 **MR. SWEENEY: The patent that is at issue today**
:39:43 **is the '627 patent. It is entitled Signal Point**
:39:47 **Interleaving Technique. It deals with the problem of burst**
:39:51 **error in trellis encoded digital signals, the type of**
:39:54 **signals used, for instance, to transmit digital television.**

:39:59 **The patent explains that burst error is a period**
:40:02 **of sustained noise or extended noise, rather than just an**
:40:07 **intermittent noise. And trellis encoding is a technique**
:40:11 **that was a fairly sophisticated coding technique that was**
:40:14 **developed in the 1980s for detecting transmission errors and**
:40:19 **then correcting them. But as the inventors of the '627**
:40:23 **patent discovered, it's quite susceptible to a burst error.**
:40:28 **So the '627 patent proposes a solution to that, to eliminate**
:40:33 **or minimize this burst error.**

:40:36 **In thinking about the invention, the analogy**

:40:39 **that has helped me is when you have a cell phone**
:40:42 **conversation with someone you know, occasionally a word is**
:40:47 **dropped because of interference. But because we know the**
:40:50 **person, we know the context, we are both speaking the same**
:40:53 **language, we usually can figure out what that word should**
:40:57 **have been, and our brain kind of decodes that and puts it**
:41:00 **back together. But in the case of burst error, where 20 or**
:41:05 **30 words in succession would be lost, our brain's decoder**
:41:09 **kind of breaks down. And that's the problem with burst**
:41:15 **error with respect to trellis encoded signals.**
:41:18 **I am going to try to explain the background of**
:41:20 **the technology a little bit before we get to the claim**
:41:23 **terms, because the coding technique itself is important to**
:41:27 **understand, so we can understand the solution to it.**
:41:33 **We have already talked about, in the first**
:41:35 **couple of days of these hearings, the transmission of**
:41:38 **digital signals, 1s and 0s, then the recovery of an image or**
:41:43 **an audio from those symbols. So I am not going to spend any**
:41:46 **real time on that.**
:41:48 **We have also talked about the concept of noise**
:41:51 **in the transmission channel, noise which would interfere.**
:41:58 **In this slide, some of the discussions in the**
:42:00 **last two days have indicated that increasing the power can**
:42:03 **solve the problem in some cases because the signal gets**
:42:06 **stronger and the signal-to-noise ratio is still quite high,**

:42:10 **and the noise doesn't interfere. But there is some types of**
:42:13 **noise that when you turn up the power you just turn up the**
:42:17 **noise, like when you maybe listen to the radio and there is**
:42:19 **static and you turn up the volume the static just gets a**
:42:23 **little louder.**
:42:25 **One of the things that can happen in these**
:42:27 **sustained burst errors, especially in the video arena, is**
:42:30 **the image can be lost, and we are not sure who we are**
:42:36 **looking at sometimes.**
:42:38 **We have talked about the way carrier waves are**
:42:41 **modulated to carry, you know, 1s and 0s. Here is an**
:42:45 **example, I think similar to what was discussed in the last**
:42:49 **two days, where the amplitude or the power of the**
:42:51 **electromagnetic wave is increased, it is modulated, we say**
:42:55 **it's changed, to represent a 1, and if it is not so**
:42:58 **modulated, then it's a 0. So modulation is an important**
:43:03 **aspect of this invention.**
:43:07 **In the field, there are a number of types of**
:43:09 **modulation. I think that's been covered briefly. Also,**
:43:13 **there is amplitude modulation, where we increase the**
:43:16 **amplitude of the wave or the power of the wave to indicate**
:43:19 **whether it is a 1 or 0. That is one parameter,**
:43:26 **amplitude. If we just modulate amplitude, we call that**
:43:29 **one-dimensional modulation.**
:43:31 **With respect to frequency, we can also increase**

:43:32 **the frequency of the signal to indicate whether we have a 1**
:43:35 **or a 0, as in what we have shown below here.**
:43:41 **We can also change the phase. In other words,**
:43:44 **we can offset the wave 90 degrees or 180 degrees from the**
:43:50 **first wave and that can be indicative of having a 1 or a 0.**
:43:54 **These angles, by the way, these degrees, which**
:43:58 **the measure of an angle comes from the fact that sine waves**
:44:02 **are used by electrical engineers -- and sign waves, we**
:44:05 **remember from high school, the sine stated, it is the sine**
:44:08 **of an angle. The sign of 0 is 0, and the sign of 90 degrees**
:44:12 **is 1. So that is where the use of these degrees comes from.**
:44:16 **But the important thing for our case here is**
:44:18 **when we modulate one of these three parameters, we call that**
:44:22 **one-dimensional modulation, whether it be amplitude,**
:44:27 **frequency, or phase.**
:44:30 **And it is possible, though, to modulate two**
:44:33 **parameters at once. Here is an example of when both**
:44:38 **amplitude and phase are both modulated. For instance, on**
:44:41 **the right-hand table there, if it is a low voltage, one**
:44:44 **volt, and let's say minus 135 degrees is the phase, that**
:44:48 **might indicate a 000. If we just keep the phase the same**
:44:53 **but change the voltage to three volts, well, maybe that will**
:44:56 **be 001. So we can develop a digital code associated with**
:45:01 **both parameters. And that's referred to as two-dimensional**
:45:07 **modulation. Sometimes that is referred to as quadriture**

:45:12 **amplitude modulation. The quadriture refers to the angle or**
:45:15 **the phase, which quadrant of an x/y axis we are in. And**
:45:21 **amplitude, of course, refers to amplitude. So that will**
:45:24 **become an issue in the claim construction part of the**
:45:27 **presentation.**

:45:30 **The other thing, we talked a little bit the last**
:45:33 **few days about coding strategy. One way to avoid errors is**
:45:37 **to, for instance, send every bit three times. I think Mr.**
:45:42 **Seitz mentioned four times. Sometimes they take the**
:45:45 **majority. If three of the bits come through -- two of the**
:45:49 **three comes through as 1s and one comes through as a 0, they**
:45:52 **will say, well, the majority rules here, we are going to**
:45:55 **choose that.**

:45:58 **One of the problems with just adding bits,**
:46:00 **however, is that redundant bits slow the transmission down,**
:46:06 **slow the speed down. And also these redundancy bits, there**
:46:10 **can be errors in those as well.**

:46:12 **So there has been some effort to develop more**
:46:14 **sophisticated coding techniques that don't compromise**
:46:18 **transmission speed. And trellis encoding is one of those.**

:46:23 **This is just an illustration of redundancy. You**
:46:28 **know, the red light tells you to stop. But even if it is**
:46:32 **not red, if it is illuminated, because of the position, you**
:46:35 **know you are supposed to stop. That is just kind of the**
:46:38 **general idea of redundancy.**

:46:44 **What I want to talk about now is trellis**
:46:46 **encoding, which is a more sophisticated coding technique.**
:46:48 **It uses something called convolutional coding. The idea of**
:46:56 **convolutional coding, which is part of trellis encoding, and**
:46:58 **we would have these shift registers, each loaded with a 0,**
:47:02 **for instance, and if we add a 1, for instance, our first**
:47:06 **data bit to be added is a 1, then that will push the 0 out**
:47:09 **of the first box and into the second. And the 0 in the**
:47:13 **second box will fall out. And they will fall out along the**
:47:17 **course of these arrows to be added where those plus signs**
:47:21 **are.**
:47:21 **This is just a very simple example of a**
:47:23 **convolutional algorithm.**
:47:25 **If, for instance, we add this 1, these additions**
:47:28 **are made at the top, and in the middle, these are binary**
:47:33 **additions, and the output happens to be a 111. That's the**
:47:36 **first time we put a 1 in. Convolutional means that it folds**
:47:41 **back on itself. So the code is a function of the data that**
:47:44 **goes in, but also the previous data that went in. So, for**
:47:49 **instance, if we put another 1 in, if we put another 1 in,**
:47:56 **this time, because there are 1s in these boxes, the**
:47:59 **computation will be different, the output code is a little**
:48:02 **different.**
:48:03 **So that is one of the techniques that is**
:48:05 **incorporated into trellis encoding.**

:48:10 **Here I have shown a one-dimensional amplitude**
:48:12 **modulation scheme to kind of illustrate how trellis encoding**
:48:16 **might work. We have different waves. We have eight of**
:48:19 **them. Each of them indicate three bits in this scheme. And**
:48:23 **some of these waves are quite similar to one another. For**
:48:26 **instance, wave A and wave E are very hard to distinguish**
:48:34 **from one another. One is 000. The other is 001. The**
:48:39 **amplitudes are not that different.**
:48:40 **So trellis encoding, one of the ideas of it is**
:48:43 **to create sets or partitions and to put in these**
:48:47 **partitions -- these are the boxes I have here -- dissimilar**
:48:51 **signals. For instance, A and B are in partition 1, that box**
:48:55 **at the top. They are quite different from one another.**
:48:58 **Now, we could have put A and H in, which are**
:49:02 **very different, but that would leave the other boxes with**
:49:05 **fairly similar signals. So we want to sort of optimize the**
:49:09 **situation, where every box or every partition has dissimilar**
:49:14 **looking waves, so they are easier to detect at the receiving**
:49:17 **side.**
:49:18 **That is one aspect.**
:49:19 **Then on the box on the left, and the patent has**
:49:22 **an illustration similar to this, a bit is put in. And then,**
:49:27 **using this convolutional coding we just discussed,**
:49:29 **additional bits are generated. In this case, it comes out**
:49:33 **as two bits, and that gives us four possibilities, if we**

:49:37 **have two bits, 00, 10, 01, and 11. In trellis encoding, for**
:49:44 **instance, we have shown in this case what came out of there,**
:49:47 **the coded bit stream was 10. And that would take us to the**
:49:52 **second partition, according to this scheme. And then we**
:49:56 **would have two signals in there, C and D, dissimilar, and**
:50:02 **then we would be told which one of those two we should send**
:50:06 **by the data bit that we received, the actual input bit,**
:50:10 **which would be a 0 or a 1. In this case we have highlighted**
:50:13 **in red the 0, so it would be wave C that would be sent. And**
:50:18 **that is how trellis encoding works on the transmit side.**
:50:23 **I have used a one-dimensional amplitude**
:50:25 **modulation scheme to illustrate it. The patent uses a**
:50:28 **two-dimensional modulation scheme to illustrate it as the**
:50:32 **preferred example.**
:50:35 **Then we go across the transmission channel. I**
:50:40 **am going to try to explain how the decoding would work in**
:50:43 **general. This is sort of pre-patent. But I think it is**
:50:46 **important to understand this.**
:50:49 **This is what they call a trellis diagram. It**
:50:53 **describes what happens in a Viterbi decoder. Viterbi was a**
:50:58 **mathematician who developed this decoding process. It is**
:51:01 **named after him. It looks like a trellis, this diagram.**
:51:04 **That is why they call it trellis encoding. What is done is**
:51:09 **the receive signals are down here at the bottom. That is**
:51:13 **what we actually receive. But we don't know whether they**

:51:16 **are correct or incorrect. We don't know if there is a**
:51:19 **mistake in there or not.**
:51:21 **So what we do is, before we receive any signals,**
:51:24 **we sort of plot the logical possibilities of what we could**
:51:28 **receive. And, for instance, if we start with 00 in the**
:51:32 **left-hand corner there, we know we must be receiving in the**
:51:36 **data either a 1 or a 0. If we receive a 1, we end up going**
:51:41 **to that state. If we receive a 0, we end up going to the**
:51:45 **state on the bottom. There is only two possibilities.**
:51:48 **Then we compare what I have put in the box here,**
:51:53 **111, is the coded version of the 1. That's what that**
:51:56 **convolutional decoder produced. The data was a 1. The**
:52:00 **decoded version that was transmitted was a 111. Similarly**
:52:03 **for 000, that is the coded version.**
:52:06 **We compare each of the encoded versions to the**
:52:10 **received signal. And we note certain discrepancies. 111,**
:52:14 **there is one -- we are 1 digit off here. The first digit in**
:52:20 **the received signal is a 0. The logical possibility was a**
:52:23 **111. So we note we have one error. On the bottom rung, we**
:52:28 **have two errors. We continue to do this. We continue to**
:52:31 **say, well, what happens if we get another 1 after we**
:52:34 **received the first 1.**
:52:35 **That brings us up here to the 11. We again**
:52:40 **compare to the receive signal, and we note the number of**
:52:44 **errors. And that's generally the Viterbi technique. I am**

:52:48 **not going to go through all of these. We don't have to**
:52:51 **solve any math problems today.**
:53:04 **And we get to the end. What the technique tells**
:53:07 **us to do is, we look at all of these errors on the various**
:53:11 **paths. It chooses the path with the least number of errors.**
:53:16 **And it says, that's what we must have received, because it**
:53:19 **is unlikely to have so many consecutive errors. And I have**
:53:22 **just drawn the least path in this particular case, that is**
:53:26 **the red path.**
:53:27 **Now, it's sort of an ingenious system. The**
:53:31 **problem is, when you have burst error, the assumption of**
:53:33 **this system, that it is very improbable that you have this**
:53:38 **many consecutive errors, is undermined. It is not true.**
:53:41 **There is a fallacy. It doesn't work. That is why the**
:53:44 **invention is needed to solve that problem.**
:53:46 **With Viterbi decoder outputs, as long as the**
:53:50 **error, as illustrated up above, is random or intermittent,**
:53:55 **it's like dropping a word or two in a cell phone**
:53:57 **conversation. We can figure out, the Viterbi decoder can**
:54:00 **figure it out, and it works fine, and we can figure out what**
:54:04 **was actually sent. But if we have burst error, three or**
:54:07 **four or five of these signals go down in a row, and we can't**
:54:11 **figure it out. That is the idea.**
:54:15 **Now, I have illustrated here another**
:54:17 **one-dimensional amplitude modulation scheme. This has 16**

different signals. They each carry four bits. When you have this burst error -- and we call these symbols that are sent out channel symbols -- once they are selected, according to the trellis encoding scheme, and you selected what you want to send, in this case it's F, that's referred to as a channel symbol. And there is a transmitted modulated wave. Well, if we lose one of those, fine, we lose four bits. But with if we lose ten in a row, we lose 40 bits. And that's going to be akin to losing a whole conversation in our cell phone talk.

So one of the things that the inventors have utilized in their invention is that they have divided this channel symbol into smaller symbols, which they refer to as signal points, and, for instance, instead of sending one big wave that carries four bits, they send two waves from a smaller group carrying two bits each. That allows us to begin to think about sending these smaller waves at different times to avoid the burst error.

These smaller waves, what I have labeled B and D, the patentee refers to as signal points in the patent.

So when we have these channel symbols coming out of a trellis encoder, again, we see if we have burst error, we have two consecutive, maybe more consecutive channel symbols going down at the same time. So the first aspect to solving the problem was reflected in an earlier patent to

:56:05 **Mr. Betts, the '625 patent, but it was incorporated in this**
:56:09 **patent as well. And the idea was to use a number of trellis**
:56:12 **encoders. The input information kind of goes in round-robin**
:56:19 **fashion from the yellow trellis encoder to the red to the**
:56:22 **green, so the information is broken up. And then the output**
:56:25 **of the various trellis encoders is interleaved, it's mixed**
:56:29 **up. And now, this sort of illustrates it, how the data is**
:56:34 **coming to the various trellis encoders. It is not all sent**
:56:38 **through the same trellis encoder. It is broken up and**
:56:40 **interleaved. And the channel symbols are interleaved as**
:56:45 **well.**

:56:47 **That means when the burst error hits, we don't**
:56:50 **lose two consecutive channel symbols from the same encoder.**
:56:53 **We don't lose two reds consecutively. We have broken it up**
:56:57 **a little bit. And that improves things somewhat. And the**
:57:04 **inventors of the '627 patent used that, again, but they also**
:57:09 **decided to break up these channel symbols into these**
:57:13 **components called signal points.**

:57:20 **Now when this is done, in addition to having**
:57:25 **these signal points, these signal points are also**
:57:28 **interleaved. And they are all mixed up. So the signal**
:57:31 **points among successive channel symbols and single points**
:57:35 **belonging to a channel symbol are interleaved. They are not**
:57:38 **next to one another. So when we have the burst error here,**
:57:41 **we don't lose any complete channel symbol. At most we lose,**

:57:45 **in this example, one-fourth of a channel symbol.**

:57:50 **Incidentally, there is some discussion we will**
:57:52 **have later on about adjacency and nonadjacency. This is a**
:57:56 **case where we have four signal points comprising a channel**
:58:00 **symbol. In that situation, before the interleaving, there**
:58:02 **is not complete adjacency. For example, signal points 1 and**
:58:06 **4 in the green are not next to each other. They are not**
:58:09 **adjacent. They still have to be interleaved to result in**
:58:12 **what is produced at the bottom there.**

:58:16 **So here, again, continuing, we have experienced**
:58:19 **the burst error, and we get these certain signal points to**
:58:23 **go down, but it's really distributed now quite a bit. It's**
:58:27 **almost like if we had a conversation and we sent the**
:58:31 **transmissions in our conversation through different routes,**
:58:34 **and then put them all together at the receive end. So if a**
:58:39 **word goes down every 20 words, we can decode that. But this**
:58:44 **avoids 20 words in a row going down.**

:58:47 **So that is kind of the idea of this invention.**
:58:53 **The patent explains this in great detail, with a lot of**
:58:57 **mathematical notation. So it was my effort to put this more**
:59:02 **in terms at least I can understand a little bit better and I**
:59:06 **think gets the concept of the invention.**

:59:08 **Getting back to "The King" here, we see that in**
:59:10 **the transmission channel, if we have this burst error, he**
:59:14 **might disappear. The deinterleaving of the signal points**

:59:21 **and the signal points in successive channel symbols allows us to get to an image something like the third one, where there is still error, there has been error, but it's been spread out. So now our decoder can convert this third image into the last image and put it together and figure out what the picture is.**

**That is the idea of the invention.**

**Now, the patent itself does illustrate the channel symbols in the context of a third example, which is a quadriture amplitude modulation example, where each signal point is a two-dimensional signal point. And then, in talking about the channel symbols, they illustrate a channel symbol with two signal points, each two-dimensional. So it then becomes a four-dimensional channel symbol. They add the dimensionality of the component signal points.**

**But the patent is pretty clear in the specification, Column 8, Line 59, that the foregoing merely illustrates the principles of the invention: Thus, although the illustrative embodiment utilizes a four-dimensional signaling scheme, the invention can be used with signaling schemes of any dimensionality. And it certainly works with any dimensionality.**

**That brings us now to the claim terms in dispute, Your Honor.**

**I am not going to read the law.**

:00:49 **This is an illustrative claim, Claim 11. It is**
:00:52 **a method claim. "A method for performing a stream of**
:00:55 **trellis encoded signal points in response to input**
:00:59 **information, said method comprising the steps of generating**
:01:03 **a plurality of streams of trellis encoded channel symbols in**
:01:07 **response to respective portions of said input information,**
:01:10 **each of said channel symbols being comprised of a plurality**
:01:13 **of signal points" -- a plurality of signal points, that is**
:01:18 **two or more, two or three or four -- "interleaving the**
:01:21 **signal points of said generated channel symbols to form said**
:01:25 **stream of trellis encoded signal points, said interleaving**
:01:28 **being carried out in such a way that the signal points of**
:01:30 **each channel symbol are nonadjacent in the stream of trellis**
:01:35 **encoded signal points and also such that the signal points**
:01:38 **of adjacent symbols in any one of said channel symbol**
:01:41 **streams are nonadjacent in said stream of trellis encoded**
:01:44 **signal points."**
:01:45 **So the terms in dispute, some of the terms in**
:01:49 **dispute, one is "signal point," two is "trellis encoded**
:01:55 **channel symbols," three is "interleaving the signal points**
:01:59 **of said generated channel symbols to form the stream of**
:02:03 **trellis encoded signal points."**
:02:05 **Let's go to our first -- we have a chart showing**
:02:07 **the parties' claim terms. I think the number of terms in**
:02:11 **dispute are manageable. We will be able to get through them**

:02:14 **all in the time allotted.**

:02:15 **So the first definition is single point. We**
:02:21 **propose, it's a value transmitted by a modulator in one**
:02:25 **signaling interval. We think the specification, as we will**
:02:29 **show you, supports that.**

:02:32 **All other parties, they have proposed a point on**
:02:35 **a two-dimensional constellation having a pair of coordinates**
:02:41 **representing two components of a corresponding signal.**

:02:45 **So they have written in what they believe is the**
:02:49 **preferred illustrative embodiment. We really don't think**
:02:54 **that's proper. We think that violates the rule against**
:02:58 **importing the preferred embodiment into the claims. The**
:03:03 **courts have said it's axiomatic that that is not going to be**
:03:07 **permitted.**

:03:08 **Claim 1 says nothing about dimensions or**
:03:11 **constellations or coordinates or components. It's not in**
:03:15 **the claim. I have shown you that one-dimensional signal**
:03:23 **points certainly can exist and certainly be the subject of**
:03:27 **trellis encoding.**

:03:29 **The courts also talk about, you know,**
:03:32 **especially, you don't go to the preferred embodiment when**
:03:34 **there is other language saying that it's broader. That's**
:03:38 **the case here. In Column 8, as I mentioned, it says the**
:03:42 **invention can be used with signaling schemes of any**
:03:45 **dimensionality.**

:03:47 **So there should be no requirement written into**
:03:50 **the claim that the signal points have to be of two**
:03:53 **dimensions, it has to be QAM, quadriture amplitude**
:03:57 **modulation.**
:03:59 **The other side took the position in their brief**
:04:01 **that there wasn't such a thing as a one-dimensional signal**
:04:05 **point. Their expert we deposed disagreed with that. So he**
:04:10 **undermined their own position.**
:04:12 **In addition, there is claim differentiation,**
:04:17 **that tells us that we can't read this two-dimensional**
:04:20 **limitation in every time we have the word signal point.**
:04:23 **There are certain claims that are directed to higher**
:04:27 **dimensionality, channel symbols, for instance, Claim 3. But**
:04:31 **many of the claims, like Claim 11, Claim 1, don't say**
:04:35 **anything about dimensionality.**
:04:37 **For all of these three reasons, we think their**
:04:40 **construction is improper and ours is the correct one, and**
:04:44 **it's quite consistent with what the patent says.**
:04:52 **Now, with respect to our proposal, a value**
:04:55 **transmitted in one signaling interval, the patent**
:05:00 **specification says, in Column 3, that "The signal point**
:05:04 **generated in the nth baud interval is passed on to a**
:05:07 **modulator to generate a pass-band signal. The specification**
:05:13 **equates a baud interval with a signaling interval."**
:05:16 **It says that, "...with a signal point**

:05:18 **interleaving regime in which the signal points at each**
:05:22 **channel symbol are separated from one another by three**
:05:25 **signaling intervals."**
:05:26 **A single point is what you transmit in a**
:05:28 **signaling interval. That is what the patent specification**
:05:31 **says. That is all that is required.**
:05:38 **That brings us to our second claim term. The**
:05:43 **second claim term is a "distributed Viterbi decoder." I**
:05:59 **tried to illustrate how that works in general. Our**
:06:02 **construction is a Viterbi decoder having multiple Viterbi**
:06:06 **decoding processes operating on separate portions of a**
:06:09 **stream of data to be decoded.**
:06:11 **Their construction is a distributed Viterbi**
:06:16 **decoder.**
:06:16 **The difference is, they say that the preferred**
:06:19 **embodiment has discrete Viterbi decoder devices. We say,**
:06:24 **well, it should be broader than that. It could be a decoder**
:06:26 **device, but it could be software as well. We think the**
:06:30 **specification supports us there.**
:06:35 **Figure 4 shows multi-Viterbi decoders, so that**
:06:46 **is fine. But the specification in Column 9, Lines 61 to 66,**
:06:50 **is very specific there. It says, "For example, multiple**
:06:53 **trellis encoders and decoders can be realized using a single**
:06:58 **program routine which, through the mechanism of indirect**
:07:01 **addressing of multiple arrays within memory, serves to**

provide the function of each of the multiple devices."

So the patent explicitly says this can be accomplished in software. That is why our construction is a little broader, including processes, not just decoders.

That brings us to the next patent term. We will just keep moving.

This term is a distributed Viterbi decoder for recovering said information from the interleaved signal points. We say it's a Viterbi decoder having multiple Viterbi decoding processes, as we said before, operating on separate portions of a stream of deinterleaved signal points to recover the information encoded therein.

AOP says it's a multiple-stage decoder -- so we have this decoder-process distinction again -- in which each stage receives all of the deinterleaved signal points of a trellis encoded channel symbol before deciding their values together using this Viterbi algorithm.

And I tried to explain the Viterbi algorithm. In other words, they say that all the signal points have to arrive before you go into this trellis diagram Viterbi analysis.

And our response is that there is nothing in the claim that requires that. There is nothing in the specification that is requiring that.

The other very important point is that the whole

point of the '627 patent is to decode the signal you received even if some signal points are lost completely, they don't arrive at all, ever. So you can't wait for them to arrive forever. You have to use the information that you have to decode the signal, so that you can re-create the image that was intended.

So we think they are writing unnecessary limitations into this claim as well.

THE COURT: What is something that is interleaved or what is interleaving?

MR. SWEENEY: We will come up to that. One example is, I have sat in this courtroom many times after jury selection, after the challenges for cause. And, for instance, if you would decide that all of the men who have been chosen to take the jury box would go into the odd seats, 1, 3, 5 and 7, and all the women to go into the even seats, that would be interleaving. You would be interleaving the men and the women.

So the idea is we interleave. We have channel symbols coming from, let's say, three -- let's make it simple -- make it two trellis encoders. Rather than having one channel symbol, two channel symbols, three channel symbols coming out of the same trellis encoder, we take one from the first, one from the second, and we mix them up. And we do the same thing with the signal points inside.

:10:15 **Again, on this point about waiting for all the**
:10:18 **signal points, it doesn't make any sense. That is the whole**
:10:20 **purpose of the invention, to be able to decode what you**
:10:24 **receive, even if some signal points don't come through.**
:10:30 **Now we are going to get into this interleaving a**
:10:32 **little bit more, I think, Your Honor.**
:10:34 **The next term is "Trellis encoded channel symbol**
:10:37 **in response to respective portions of said input**
:10:41 **information, each of said channel symbols comprised of a**
:10:44 **plurality of signal points."**
:10:47 **We proposed a set of two or more trellis encoded**
:10:50 **signal points that correspond to a group of bits that is**
:10:55 **treated as a unit by the encoding system.**
:10:59 **Incidentally, Comcast didn't dispute this term**
:11:03 **when it was discussed in the Texas litigation. AOP's**
:11:07 **construction is similar in some ways, but you can see, there**
:11:10 **is something in here I think that doesn't belong. They say**
:11:13 **two or more signal points all selected using the same group**
:11:17 **of parallel input bits as expanded once by a trellis**
:11:22 **encoder.**
:11:24 **Now, trellis encoders do add bits. We talked**
:11:28 **about that, adding redundancy bits. The specification in**
:11:32 **the patent, Column 3, Lines 60 to 66, the preferred**
:11:37 **embodiment, does say, "For example, specifically, three**
:11:41 **parallel bits are expanded into four bits."**

:11:46 **So they want to limit this term to that exact**
:11:50 **addition.**
:11:51 **But expanded once is not required by the claims.**
:11:55 **It's an illustrative example. And if we put expanded into**
:11:59 **this claim once, then there will be a big dispute about what**
:12:04 **expanded once means. How many bits does that mean you are**
:12:07 **going to have? So we think it is reading an unnecessary**
:12:10 **limitation into the claim and causing confusion.**
:12:14 **If it is trellis encoding, I think that will be**
:12:16 **sufficient.**
:12:23 **We are now at the fifth term, "stream of trellis**
:12:28 **encoded channel symbols." We propose a sequence of trellis**
:12:33 **encoded channel symbols, which kind of seems self-evident.**
:12:37 **If there is a stream of trellis encoded channel symbols,**
:12:42 **that means a sequence of them, one after the other.**
:12:45 **THE COURT: Why wouldn't plain and ordinary**
:12:47 **meaning suffice here?**
:12:48 **MR. SWEENEY: I think it would, Your Honor.**
:12:51 **Now, AOP, they propose a sequence of trellis**
:12:54 **encoded channel symbols in which each symbol's signal points**
:12:58 **are adjacent. What they are saying here, I think, is that,**
:13:04 **well, if you are going to interleave them to make them**
:13:07 **nonadjacent, they must be adjacent before you do the**
:13:12 **interleaving.**
:13:14 **If we look at the claim, though, Claim 1 -- all**

:13:17 **the claims are like this -- they don't say anything about,**
:13:20 **you know, this stream of trellis encoded channel symbols.**
:13:23 **They say they have a plurality of signal points. They don't**
:13:27 **say they have to be adjacent. But they do say on the**
:13:30 **receive side they have to end up nonadjacent. So the signal**
:13:35 **points of each channel symbol are nonadjacent at the end,**
:13:38 **and the signal points of adjacent symbols are nonadjacent at**
:13:43 **the end.**

:13:50 **Now, Claim 1 also talks about the channel**
:13:54 **symbols comprising a plurality of signal points. So a**
:14:00 **plurality is two or more than two. For instance, if we had**
:14:04 **four signal points in each channel symbol, one and three are**
:14:09 **nonadjacent. Two and four are not adjacent. One and four**
:14:13 **are not adjacent. So we can't put in this adjacency**
:14:17 **requirement. These still have to be interleaved, because**
:14:19 **all the symbol points within one channel symbol have to be**
:14:22 **interleaved with respect to symbol points in other channel**
:14:24 **symbols. But requiring adjacency would read out what the**
:14:28 **patent tells you you should have, a plurality of signal**
:14:30 **points.**

:14:35 **So we are interested here in how the signal**
:14:38 **points end up. We are concerned about -- you know, we don't**
:14:41 **know what their exact process is, but we are concerned that**
:14:45 **they will generate and interleave signal points at the same**
:14:49 **time and say, see, they were never adjacent. But the patent**

:14:53 **doesn't require them to be adjacent, standing in line. They**
:14:56 **can be generated and interleaved almost simultaneously, with**
:15:00 **the technology today.**
:15:02 **We have a little bit of a silly example of a**
:15:06 **movie theater. It shows how people are walking in. We are**
:15:09 **going to interleave them. The men are going to sit, you**
:15:13 **know, one away from the women. That's similar to the jury**
:15:17 **box example. Just because they end up interleaved doesn't**
:15:20 **mean all the women were standing in line right next to each**
:15:22 **other at the beginning. They may have come up quite**
:15:25 **separately. So I think that is the principle.**
:15:32 **I think we are ahead of schedule, so I can go to**
:15:34 **the end of this.**
:15:40 **Of course, they are watching "The King," Your**
:15:44 **Honor.**
:15:53 **All right. That brings us to the next -- we are**
:15:58 **going to keep running into this adjacency throughout some of**
:16:01 **these things. The next phrase is "interleaving the signal**
:16:06 **points of said generated channel symbols to form a stream of**
:16:10 **trellis encoded signal points."**
:16:12 **So our construction is, to interleave the signal**
:16:15 **points of the encoded channel symbols to form a stream of**
:16:18 **trellis encoded signal points. I think that is essentially**
:16:22 **plain meaning.**
:16:22 **THE COURT: Would it help the jury to give some**

**definition to interleaving?**

**MR. SWEENEY: Yes.**

**THE COURT: To the term?**

**MR. SWEENEY: I think it might be, or even an example, yes.**

**This was the Texas Court, I think, did adopt some of these constructions, and those are the ones we have initially proposed. But I think interleaving is something that might be helpful, Your Honor. Probably a dictionary definition would do the job there.**

**Now, in AOP's construction, again they say, well, it's separating the adjacent signal points. They presuppose that these signal points are adjacent to begin with and you separate them. That's wrong, for the reasons we have already discussed. But there are some additional things, too, because this construction is actually inconsistent with the express requirements of the claim.**

**First of all, they don't -- as I mentioned, if you have multiple signal points, more than two, there can't be adjacency to begin with. That is improper, to require that. The claims talk about two types of interleaving, interleaving being carried out, we have in the pink there, in such a way that the signal points of each channel symbol are nonadjacent. And in the green we have that the signal points of the adjacent symbols in any one of channel symbols**

:17:50 **are nonadjacent in the stream.**

:17:52 **So there is two distinct requirements.**

:17:55 **If we have coming out of this trellis encoder --**
:17:57 **and this is a drawing that we have adapted from the**
:18:00 **patent -- we have two channel symbols. They each have two**
:18:04 **signal points. The first one has signal Points X6 and X7.**
:18:08 **The second channel symbol has X0 and X1. Well, one of the**
:18:13 **things we do is we separate the signal points within a**
:18:17 **channel symbol. So X0 and 1 become separated down here. So**
:18:22 **they are interleaved.**

:18:24 **The same is true with X6 and X7. But we also**
:18:29 **want to interleave -- we want to make sure X1 and X6 are not**
:18:34 **next to each other, because they are signal points in**
:18:37 **adjacent channel symbols. We want to mix those up, too.**
:18:41 **The claims expressly require that. Well, AOP's definition**
:18:46 **does not require that. So they just want to interleave**
:18:51 **signal points within, adjacent signal points within a**
:18:56 **channel symbol. So their construction is actually**
:18:58 **inconsistent with the two requirements of the claim.**

:19:02 **Here is sort of a diagram to show, we have kind**
:19:05 **of animated the patent drawing to show how the interleaving**
:19:10 **occurs, where these two types of interleaving both take**
:19:14 **place.**

:19:45 **That is how it ends up. That shows you how the**
:19:48 **signals go through this signal point interleaver.**

:19:52 **So we think AOP's construction has got to be**
:19:55 **wrong. It excludes what the claim requires, interleaving**
:19:58 **signal points among successive channel symbols. And it also**
:20:02 **requires this starting out adjacency, which is inconsistent**
:20:07 **with having multiple signal points in a channel symbol.**
:20:17 **Going back to the claim again, this claim**
:20:19 **requires these two types of, distinct types of interleaving.**
:20:25 **They don't really require that in their claim construction.**
:20:34 **Also, if we stick with what they say, AOP**
:20:37 **proposes separating the adjacent signal points of each**
:20:41 **trellis encoded channel symbol using other signal points.**
:20:45 **Well, if you have four signal points, A, B, C and D, what**
:20:48 **they tell you to do is mix all those up, so C and B are no**
:20:52 **longer adjacent to one another. But the patent requires**
:20:55 **these signal points being interleaved with signal points**
:20:59 **with other channel symbols, not just what they say. It is**
:21:04 **really an illogical construction, and it's wrong for many**
:21:07 **reasons.**
:21:08 **Okay. Now we are getting more on the receive**
:21:11 **side. We are going to, we interleave something, on the**
:21:16 **other side we have to deinterleave it.**
:21:18 **So we simply say, we reverse the process of**
:21:22 **interleaving performed in the transmitter to recover**
:21:25 **multiple streams of trellis encoded channel symbols from the**
:21:28 **interleaved signal points. That's totally consistent with**

:21:34 **the specification, which I will show you in a moment.**

:21:37 **AOP says, restoring the adjacency of the**

:21:40 **separated signal points. So they are quite persistent.**

:21:42 **They really want to start out requiring everything to be**

:21:44 **adjacent. So they keep saying it in every claim term. They**

:21:48 **restore the adjacency of the separated signal points of each**

:21:51 **trellis encoded channel symbol to recover two or more**

:21:54 **streams of trellis encoded channel symbols.**

:21:58 **This is flawed for a number of the reasons we**

:22:00 **have already mentioned, and then some. Interleaving, going**

:22:07 **back to our kind of basic diagram at the very beginning,**

:22:10 **means to mix these things up, these signals. Deinterleaving**

:22:15 **means to unmix them so we can have our image.**

:22:22 **Again, restoring the adjacency, the patent**

:22:25 **doesn't require adjacency to begin with. It only talks**

:22:28 **about how the signals are to end up.**

:22:31 **There is two types of interleaving required**

:22:35 **here, what we have talked about in the pink and in the**

:22:40 **green. The pink is the signal points within a channel**

:22:43 **symbol. They must be nonadjacent. We call that**

:22:50 **inter-channel symbol interleaving. We also talk about the**

:22:54 **signal points of adjacent symbols in any one of channel**

:22:58 **streams are non-adjacent or intra-channel symbol**

:23:02 **interleaving. When we did interleave, we have to do the**

:23:06 **reverse of both of those steps, not just one of those steps.**

:23:10 **So the deinterleaving is deinterleaving signal points to**
:23:14 **recover the plurality of streams.**
:23:16 **AOP only wants to deinterleave the interleaving**
:23:19 **step of the pink, not the green. So it's an incomplete and**
:23:23 **inconsistent construction, in addition to the fallacy of**
:23:27 **this restoring adjacency.**
:23:30 **Now, the patent specification tells us sort of**
:23:33 **what deinterleaving means. Column 5, Line 67, it says, "The**
:23:39 **successive received signal points are deinterleaved in**
:23:42 **signal point deinterleaver 441."**
:23:45 **So this is sort of the pink requirement of the**
:23:48 **claim that we have highlighted. It deinterleaves, the**
:23:54 **successive signal points are deinterleaved in signal point**
:23:58 **deinterleaver which provides the opposite function to**
:24:00 **interleaver 341. That is the signal points belonging to a**
:24:04 **channel symbol.**
:24:06 **Then the patent also talk about, in Column 6,**
:24:09 **which we have highlighted here, "The received signal points**
:24:14 **on lead 442 are then distributed by switching circuit 431**
:24:17 **under the control of the symbol clock to a distributed**
:24:21 **Viterbi decoder comprised of four-dimensional Viterbi**
:24:24 **decoder stages, 419 alpha," et cetera.**
:24:28 **This is what is done to deinterleave the signal**
:24:32 **points among successive channel symbols. So both acts have**
:24:36 **to be done.**

:24:37 **So AOP's construction is limited to deinterleaving the signal points of each trellis encoded channel symbol. Therefore, it is just wrong. It is not logical. It is not what the patent says to do.**

:24:47 **It also has this fallacy of restoring adjacency that wasn't required in the first place.**

:24:54 **Okay. That brings us to the next claim term. We are moving along. We are getting there, Your Honor.**

:25:02 **That's a device, this is "a receiver apparatus." I think plain meaning would probably do fine here. We say it's a device that receives a transmission signal. I think that's self-evident.**

:25:15 **AOP has added something to this claim. They say it's a device that demodulates a received signal and recovers information in the form of a serial bit stream.**

:25:32 **Let's look at the patent specification, Column 1, it talks about what happens in the receiver. "In the receiver, the stream of received interleaved channel symbols is correspondingly distributed to a plurality of trellis decoders."**

:25:44 **So a receiver is something that receives a signal. That is what the Telecom Dictionary says, too. It is a device which receives the transmission.**

:25:59 **Now, this may be a little bit of a tempest in a teapot, because the receiver apparatus, we are just**

:26:07 **construing this claim receiver apparatus. The rest of the**
:26:10 **claim, the remaining words of the claim kind of tell you,**
:26:14 **you know, what it's supposed to do. It is for recovering**
:26:18 **information from a received stream of trellis encoded signal**
:26:22 **points.**
:26:24 **Recovering information, Your Honor, is**
:26:26 **demodulation. It's extracting the information. But that**
:26:32 **shouldn't be built into the word receiver apparatus because**
:26:35 **then you will end up saying it twice. You will say receiver**
:26:39 **apparatus for recovering information or demodulating for**
:26:41 **recovering information. There is no need for that. The**
:26:45 **claim tells you that the receiver apparatus also recovers**
:26:48 **information.**
:26:50 **But you notice that the claim says it's**
:26:52 **perfectly fine for recovering information from a received**
:26:54 **stream of trellis encoded signal points. But AOP puts**
:27:00 **another word in there. They say in the form of a serial bit**
:27:04 **stream. Well, the claim doesn't require a serial bit**
:27:07 **stream. It just says a stream of trellis encoded signal**
:27:11 **points. This could be received in parallel, for instance.**
:27:14 **There is no requirement of this serial bit stream.**
:27:18 **They start out by trying to add redundancy by**
:27:21 **putting what the claim says anyway into the first word of**
:27:25 **the claim and then repeating it. But they do put in this**
:27:28 **serial bit stream, which has no place, it's not in the**

:27:31 **claim.**

:27:33 **The patent does tell us, in Column 2, that "It**
:27:40 **will be appreciated that whenever bits are provided in**
:27:43 **parallel, separate leads are required." So the patent does**
:27:48 **contemplate in some cases parallel transmission.**

:27:54 **Okay. That brings us to the means-plus-function**
:27:59 **claims, Your Honor. I think we have about three or four of**
:28:02 **those terms.**

:28:13 **The first is means for generating --**
:28:16 **incidentally, on these exhibits at the top, I have put the**
:28:20 **claims that these terms pertain to. When we put the claim**
:28:25 **terms up and the competing constructions, we put at the top**
:28:28 **the claims that these terms appear in.**

:28:31 **That is throughout the presentation.**

:28:35 **THE COURT: Isn't there essentially agreement**
:28:37 **here? No?**

:28:39 **MR. SWEENEY: On function, there is agreement.**
:28:41 **That's correct. There is agreement.**

:28:43 **This is a means for generating the plurality of**
:28:46 **streams of trellis encoded channel symbols.**

:28:48 **As to the structure, we propose a distributed**
:28:53 **trellis encoder that implements the multiple trellis**
:28:57 **encoding processes operating on the respective portions of**
:29:00 **the information.**

:29:00 **They say parallel trellis encoders and encoders**

:29:03 **that generate signal points.**

:29:07 **We think they are being too restrictive on the**
:29:10 **structure. The alternative structures have to be considered**
:29:15 **that are mentioned in the patent. In the specification,**
:29:25 **Column 9, Line 52, it does say, "The function of any one or**
:29:29 **more of the elements could be implemented with any**
:29:31 **appropriate available technology, including one or more**
:29:33 **appropriately programmed processors, digital signal**
:29:37 **processing, DSP chips," et cetera. "For example, multiple**
:29:41 **trellis encoders and decoders can be realized using a single**
:29:48 **program routine."**

:29:49 **We think that also qualifies as alternate**
:29:51 **structure and it can be done in that way as well.**

:29:54 **That is what that dispute is about.**

:29:57 **We asked their expert if that's correct, and he**
:30:01 **agreed with that. That's Dr. Gitlin.**

:30:06 **So I think that is the end of that claim term**
:30:10 **dispute.**

:30:12 **The next means-plus-function claim is means for**
:30:15 **interleaving the signal points of the generated channel**
:30:19 **symbols to form a stream of trellis encoded signal points.**
:30:23 **Again, we have the function agreed upon, Your Honor.**

:30:27 **With respect to structure, we say it's the**
:30:29 **signal point interleaver and/or switching circuit, or a**
:30:33 **processor programmed to interleave the signal points of the**

:30:36 **trellis encoded channel symbols.**

:30:39 **They say it must be only the signal point**
:30:41 **interleaver 341, including delay elements 3411 or signal**
:30:47 **point interleaver 641, including delay elements 6411, 6412**
:30:53 **and 6413. We agree that structure does it, but it's not the**
:30:58 **only structure, we say.**

:30:59 **Now, the signal point interleaver, the patent**
:31:04 **shows, that's 341 -- or 641, interleave symbol points**
:31:09 **belonging to a channel symbol. But there is also a**
:31:13 **switching circuit involved. The switching circuit**
:31:16 **interleaves the signal points among successive channel**
:31:19 **symbols. Two types of interleaving.**

:31:22 **So they respond to the structure. But we also**
:31:25 **have this paragraph saying, "This function can be**
:31:29 **implemented with appropriately programmed processors," and**
:31:35 **that is a way to do it as well. And we think it should be**
:31:38 **considered as an alternative structure, expressly**
:31:43 **contemplated by the patent. That's Column 9, Lines 52 to**
:31:49 **66.**

:31:50 **So AOP's proposed construction excludes the**
:31:53 **disclosed switching circuit of the first embodiment. We**
:31:57 **think that is incorrect. And their claim construction**
:32:01 **proposal also excludes the disclosed alternative programmed**
:32:03 **processor. We think that is also incorrect.**

:32:10 **Okay. We are now to Term 11, which is also a**

:32:14 **means-plus-function claim. Means for deinterleaving the**
:32:18 **interleaved signal points to recover said plurality of**
:32:20 **streams of trellis encoded channel symbols.**
:32:25 **These are the signal points. Okay.**
:32:27 **So the function, again, is agreed upon, Your**
:32:31 **Honor.**
:32:32 **With respect to structure, we say it's the**
:32:34 **signal point deinterleaver and/or switching circuit or,**
:32:38 **again, the processor program to do the deinterleaving.**
:32:41 **THE COURT: Is the difference here much the same**
:32:44 **as the last?**
:32:45 **MR. SWEENEY: Yes. It's similar, Your Honor.**
:32:51 **It's very similar to the interleaving side.**
:32:55 **Both the switching circuit and the deinterleaver are**
:32:59 **referred to in the patent. And also this statement that it**
:33:04 **can be done with software and program processor is also**
:33:08 **there as well.**
:33:09 **So their approach excludes the disclosed**
:33:13 **switching circuit of the first embodiment. That switch**
:33:17 **circuit is important, because that's what ends up in**
:33:19 **interleaving the signal points in adjacent channel symbols.**
:33:24 **So it is an important aspect of the claim.**
:33:27 **They also exclude the alternative program**
:33:30 **processor.**
:33:31 **That passage there that I keep flipping up from**

:33:35 **Column 9 has an interesting statement at the top. It says,**
:33:39 **"It will be appreciated that although various components of**
:33:42 **the modem transmitter and receiver are disposed here for**
:33:46 **pedagogic clarity as a discrete function," then it goes on**
:33:51 **to say, these can be done in software, as you know.**
:33:54 **So this is alternative structure, I think, to**
:33:57 **those of ordinary skill in the art.**
:33:59 **Your Honor, I think I have come to the**
:34:01 **conclusion of my opening remarks.**
:34:03 **THE COURT: Okay. Thank you, Mr. Sweeney.**
:34:07 **Before you start, Mr. Reines, let's take a short**
:34:10 **stretch break.**
:34:11 **MR. REINES: Thank you.**
:34:12 **(Recess taken.)**
:43:50 **THE COURT: All right. Let's continue. Please**
:43:53 **proceed.**
:43:54 **MR. REINES: Thank you, Your Honor.**
:43:55 **THE COURT: Mr. Reines, good morning. Do you**
:43:59 **have something for us?**
:44:00 **MR. REINES: Yes.**
:44:17 **Your Honor, we have grouped the claim terms in**
:44:20 **six groupings. I will handle the first three and Mr.**
:44:24 **Benyacar will handle the remaining three.**
:44:27 **Let's jump right into "signal point," which is**
:44:29 **the first term.**

:44:36 **Here we have the term signal point. We have the**
:44:38 **competing definitions. The first thing to understand about**
:44:40 **signal point is its role within the claim. So each of the**
:44:44 **claims is going to say, each of said channel symbols being**
:44:49 **comprised of a plurality of signal points.**
:44:51 **That is something that Mr. Sweeney acknowledged**
:44:54 **as well, that in the patent and in the claims, the symbol is**
:44:58 **made up of building blocks, and the building blocks are the**
:45:01 **signal points. So in the simple case, you have a symbol**
:45:05 **which is two signal points. That's what it is, at its very**
:45:09 **essence.**
:45:10 **The question is, okay, what's that signal point**
:45:12 **that's going to the two or three, whatever the number is,**
:45:17 **building blocks of the channel signal?**
:45:19 **Starting with the summary of the invention**
:45:22 **first, the very first sentence, the patent makes clear, when**
:45:24 **you open it up and read the first sentence, that it is an**
:45:27 **improvement upon a system with a 2N-dimensional channel**
:45:32 **symbol. So it says, "In accordance with the present**
:45:35 **invention, a data communication system using 2N-dimensional**
:45:39 **channel symbols can be further enhanced."**
:45:43 **Okay. Well, that 2N-dimensional channel symbol**
:45:46 **is not something someone off the street understands. So**
:45:48 **first, let's understand what it is that the patent is**
:45:51 **saying. Okay, let's take the system we have, and let's**

improve it, and further enhance that system.

The question is, what is 2N? That is relatively simple. Let's demystify that. The N is the number of signal points. This goes to the fact that you can have -- as long as you have more than 1, you can 2, 3, 4, 5 signal points that make up this complex channel symbol. So N is just saying how many signal points are you using in the channel symbol, 2, 3, 4, 5, 6, 7, 8, what the number is. That is stated right in the patent itself, the N two-dimensional signal points, the N signal points.

The 2 refers to how many dimensions each signal point is made up of. It says very simply in the patent, two-dimensional signal points. So that what you have got when you have a 2N channel symbol, which is what the patent is all about by its own terms, all signal points are two dimensions, by their very character, and you have N number of them. You can choose how many you want as long as you have got more than one. That is the plurality.

That is the basic nomenclature on this central concept. This is conceded by Rembrandt. We are not talking about debating. N is the number of signal points that make up the symbol and each one of the signal points is two dimensions. That's what 2N-dimensional channel means, right out of their brief.

What is a signal point? One of the interesting

:47:24 **things is, this isn't a plain meaning. You didn't hear**
:47:27 **Rembrandt say that. They said that I think 86 times in the**
:47:31 **other eight patents. They said this is the patentee's**
:47:35 **language. And that is agreed. We have to figure out what**
:47:37 **signal point is, because it is the language of the patent.**
:47:39 **A classic case to look at the intrinsic materials in the**
:47:41 **patent. What do they mean by signal point?**
:47:44 **Well, again, right here, Figure 2 shows what's**
:47:49 **intended. It is a constellation that has got a graph with a**
:47:54 **Q and an I dimension. That is two dimensions. Yesterday,**
:47:57 **even Mr. Rozendaal, when he was describing signal points, it**
:48:00 **came up yesterday a little bit, he said it's your graph from**
:48:03 **high school with the two axes, that is two dimensions, x and**
:48:08 **y. Right here. That means the nomenclature Q and I.**
:48:12 **So you didn't see this figure from the patent in**
:48:14 **the presentation you just saw. You saw a lot of made-up**
:48:19 **figures that kind of look like patent figures. But they**
:48:21 **weren't actually from the patent. Looking right at Figure**
:48:25 **2, it tells you a signal point by its very character is a**
:48:28 **point on a grid that is two-dimensional. That is what it**
:48:32 **is.**
:48:33 **Now, you pick up the patent, and anyone, any**
:48:38 **academic pursuit or technical pursuit, the first thing you**
:48:42 **look at is the abstract to understand at the high level what**
:48:45 **we are talking about. This patent is sort of interesting.**

:48:47 **It has a one-sentence abstract, Your Honor. One sentence.**
:48:50 **The only thing that the patent says in introducing the**
:48:54 **reader to the patent is, we are going to tell you how to**
:48:57 **further enhance a 2N-dimensional channel symbol. That is,**
:49:02 **each signal point is two dimensions. You can have any**
:49:04 **number of them you want as long as it is more than one.**
:49:07 **It says, how are you going to improve that? We**
:49:10 **are going to add this interleaving technique. We will get**
:49:12 **into the whole interleaving and adjacency in a minute.**
:49:15 **Right now we are just defining what a signal point is.**
:49:21 **Now, they described the prior art that's being**
:49:23 **improved on. That is extra important in this patent.**
:49:26 **Just by way of background, Betts, the inventor,**
:49:30 **had a prior patent called the '625 patent. I know the Court**
:49:32 **is familiar with that from the briefing and even the**
:49:35 **presentation earlier.**
:49:37 **And so this is really building on the prior art**
:49:41 **incrementally. And the patent is pretty up front about**
:49:43 **that.**
:49:44 **The first sentence, again, the first sentence,**
:49:46 **no ellipsis or anything else, "Prior art modem employing a**
:49:52 **2N-dimensional signaling scheme." That is what we are**
:49:54 **working on, that is what we are improving, where N is**
:49:57 **greater than 1. That is requiring that there be more than**
:50:00 **one signal point. We take the two-dimensional signal**

**points, we are using many of them. Let's move on and figure out what we were doing with that.**

**The summary of the invention, which is the best place to learn what's meant by the patentee with the term signal point, is very interesting on this issue, because, it has a unique structure, the summary of the invention here. The patentee included a first paragraph in the summary of the invention that describes the invention itself, and then for the remaining two paragraphs refers to preferred embodiments. So they are making a stark distinction between when they are describing the invention and when they are describing the preferred embodiments. They couldn't be more clear in doing so.**

**We are talking about, we are relying on the first paragraph, which is by its very terms the present invention.**

**Let's pull that up.**

**It says, "In accordance with the present invention, it has been realized that the Viterbi decoder performance in a data communication system using 2N-dimensional channel symbols can be further enhanced..."**

**No person of ordinary skill in the art reading this patent can conclude anything other than the context of this patent is 2N-dimensional channel symbols, from the description of the prior art, from the abstract, from the**

:51:29 **first sentence in the summary of the invention, saying,**
:51:32 **reader, we are further enhancing 2N-dimensional symbols and**
:51:37 **here is how we are doing it, with the interleaving**
:51:39 **technique, which we will get to in a minute.**
:51:41 **There is just no way a person of ordinary skill**
:51:43 **in the art reading it could understand it any other way.**
:51:49 **Every embodiment in the patent uses**
:51:53 **two-dimensional signal points, Your Honor. This familiar**
:51:56 **grid that you saw yesterday in the context of the**
:51:59 **eight-patent cable case, but that you didn't see this**
:52:02 **morning when you had the presentation, you saw**
:52:05 **single-dimension point, things that we have never seen**
:52:07 **before, we haven't seen it in the briefing. Completely made**
:52:10 **up in the last few days, presumably, in the presentation,**
:52:13 **every way. You can look high and low in the patent. All**
:52:16 **they are talking about is two-dimensional signal points,**
:52:19 **because that's all a signal point is. That's all the signal**
:52:22 **point is in the context of this patent. Every single case.**
:52:28 **You won't hear any argument from opposing counsel to the**
:52:31 **contrary.**
:52:31 **You saw made-up drawings that they made up. You**
:52:34 **remember, Mr. Sweeney said, I am going to tell how the**
:52:36 **patent works. I will use the one-dimensional example.**
:52:38 **That's not what's in the patent. We have got all kinds of**
:52:41 **examples in the patent. Every single one is**

:52:43 **two-dimensional. He didn't show you any of those.**

:52:47 **Now, I am not going to belabor the law, because**
:52:49 **the Court knows the law as well as anybody. If you look at**
:52:54 **the Ormco case, On Demand, and Finisar, these cases are**
:52:57 **dead-bang clear, you can't attribute to claims a meaning**
:53:01 **broader than any indicated in the patents and their**
:53:05 **prosecution history.**

:53:05 **You just look at some of the factors. Customer**
:53:08 **meant retail customer because that's how it was used in the**
:53:10 **patent. Information database meant the specific information**
:53:13 **database being discussed.**

:53:14 **In this case where you have Rembrandt conceding**
:53:17 **signal point is a term of the patent, and not anything**
:53:21 **that's plain meaning, reading the first sentence of the**
:53:24 **abstract, the first sentence of the summary of the**
:53:26 **invention, the first sentence of the specification, every**
:53:30 **embodiment, the only thing you would understand is that the**
:53:32 **signal points are two-dimensional because they are on that**
:53:34 **familiar grid, x and y, that is two dimensions.**

:53:39 **We don't want to shy way from the criticisms**
:53:41 **from Rembrandt. Let's look at them. There are three of**
:53:44 **them. In fact, Mr. Sweeney counted them out.**

:53:47 **The first one is that signal points can be of**
:53:49 **any dimensionality, then claim differentiation, then this**
:53:55 **limiting to the preferred embodiment. Let's go through them**

:53:58 **one by one.**

:53:59 **This is the central one. The specification is**
:54:00 **clear. The invention can be used with signaling schemes of**
:54:03 **any dimensionality. That was pounded this morning. Any**
:54:06 **dimensionality. Well, there is a little sleight of hand**
:54:11 **there, Your Honor, to be candid. What "any dimensionality"**
:54:16 **means is the symbols can be of any dimensionality. That is**
:54:19 **N. You can use any number of signal points, adding a signal**
:54:24 **point adds to the number of dimensions by two -- two, four,**
:54:28 **six, eight. And it says it through the specification, they**
:54:31 **give examples, here is 4, here is 8. And they go up like**
:54:34 **that.**

:54:34 **The signaling scheme isn't defining the signal**
:54:37 **point. First of all, the invention can be used with**
:54:40 **signaling schemes of any dimensionality. We know that is**
:54:43 **not true, because there has to be a plurality of signal**
:54:46 **points. Right away, it is immediately two or more, because**
:54:49 **even if you accept that a signal point could somehow be not**
:54:52 **on the familiar grid, not a two-dimensional signal point, it**
:54:56 **still wouldn't be one.**

:54:58 **And it was very odd, I thought, very odd that**
:55:00 **the numbers that were chosen on the presentation, and you**
:55:02 **can go back in chambers and see this, were one, three, five,**
:55:07 **seven. One is not possible because a signaling scheme of**
:55:10 **one dimension, the whole point of this is a**

:55:13 **multi-dimensional symbol with multiple signal points. Since**
:55:17 **all the signal points have to be two-dimensional, that's**
:55:20 **what it says throughout the patent as we have just**
:55:23 **demonstrated, it is going to be even numbers.**
:55:28 **Right here it says, "The illustrative embodiment**
:55:30 **utilizes a four-dimensional signaling scheme." Well, it**
:55:34 **does. That's because it is referring to the symbols, not**
:55:38 **the signal points. Right down there, Figure 3, refers to**
:55:45 **this illustrative embodiment, four-dimensional channel**
:55:49 **symbols. Now we have that underlined in red. That is two**
:55:52 **signal points of two dimensions each. Two times two is**
:55:58 **four.**
:55:59 **So signaling scheme doesn't define a signal**
:56:01 **point. It defines the symbol, and there is no doubt about**
:56:04 **that. That's made clear here.**
:56:09 **Now, when you read on and you look at the**
:56:14 **context of the sound bytes that got snippeted out for the**
:56:18 **Court, it says "signaling schemes of any dimensionality,"**
:56:21 **the very next sentence says, "In the general, 2N-dimensional**
:56:25 **case each stage of the distributed trellis encoder would**
:56:28 **provide N two-dimensional subset..."**
:56:31 **That is two-dimensional signal points and the**
:56:33 **general 2N-dimensional case. So it is saying, the genus is**
:56:37 **your 2N-dimensional case because that's what everyone knows**
:56:41 **the patent is talking about right in the first sentence of**

:56:43 **the summary of the invention. That is two dimensions under**
:56:47 **the signal point and number. And then it says, you can use**
:56:50 **N number of two-dimensional subset signal points, right**
:56:53 **there, the immediate sentence right afterwards, which is**
:56:56 **further proof. They are acknowledging that in general, what**
:56:59 **we are talking about is the 2N-dimensional. In the**
:57:02 **specifics cases, it is not using general meaning exception,**
:57:05 **it is using general versus specific. The specific is**
:57:07 **whatever N is.**

:57:11 **We don't have to guess that signaling scheme**
:57:14 **refers to symbols. We just demonstrated that. When the**
:57:16 **patent talks about four-dimensional signaling scheme, it is**
:57:21 **talking about four-dimensional symbol. Just out of the**
:57:24 **prior slide. Four-dimensional signaling scheme,**
:57:27 **four-dimensional symbol.**

:57:28 **So, yes, you can have any dimension, meaning**
:57:31 **two, four, six, eight, ten, 12, 14, however many you want,**
:57:35 **that's N. But it's always going to be two-dimensional,**
:57:39 **because that's all anyone is talking about with a signal**
:57:41 **point in this technology, except Mr. Sweeney in his**
:57:43 **presentation this morning.**

:57:47 **Rembrandt's second argument -- that is the only**
:57:49 **thing you saw from the specification, is that one fragment.**
:57:52 **And I just explained to you why that is a symbol, not signal**
:57:56 **point.**

:57:56 **The second argument is claim differentiation,**
:57:58 **which they told you compels you to reject the fact that**
:58:02 **signal point is two dimensions in this patent.**
:58:07 **The doctrine of claim differentiation doesn't**
:58:10 **compel anything, as the Court knows. It is a guide, not a**
:58:13 **rule. You figure out what helps you, what sense it makes.**
:58:17 **If it makes sense you do it, if it doesn't, you don't.**
:58:21 **In Sinorgchem, the Court said, since the two**
:58:26 **claims aren't being rendered identical, claim**
:58:27 **differentiation doesn't apply in that case.**
:58:31 **Here there is no doubt that the independent**
:58:32 **claims and the dependent claims are of different scope, even**
:58:36 **when you understand that we are talking about**
:58:38 **two-dimensional signal points. And that's because of all**
:58:41 **this green, what happens is, what they say is they refer**
:58:46 **back to this core concept of 2N-dimensional channel symbols**
:58:50 **where N is greater 1. Then it says, okay, now we are**
:58:54 **playing with N, here is what we want you to do with every N**
:58:58 **signal point. And they start playing with N.**
:59:00 **There is all kinds of limitations. Every single**
:59:02 **dependent claim they rely on, seven of them, has numerous**
:59:07 **limitations, beyond the difference between a two-dimensional**
:59:10 **signal point and anything else. There is just no**
:59:13 **straight-faced argument that the claims should be identical**
:59:15 **if the Court acknowledges the fact that signal points are**

:59:19 1 **two-dimensional.**

:59:24 2 **Let's go to their real argument. It is not**
:59:26 3 **really a claim differentiation argument, because that**
:59:29 4 **doesn't work, as we just went through. There is too many**
:59:31 5 **other limitations. That is a non-starter.**

:59:34 6 **Their real argument is, why did they just use**
:59:37 7 **the term signal point in Claim 1 but when they got to the**
:59:40 8 **dependent claims they started using the nomenclature**
:59:42 9 **2N-dimensional channel signals? He didn't say that in those**
:59:47 10 **terms. But I think when you cut through it, that is the**
:59:49 11 **real argument -- Hey, wait: That is different terminology.**
:59:53 12 **2N-dimensional channel symbols even they agree now means**
:59:56 13 **two-dimensional signal points because that is the whole**
:59:58 14 **thrust of their claim differentiation argument.**

:00:00 15 **Why didn't they use that in Claim 1? There is a**
:00:03 16 **good answer to that. First of all, this Curtiss-Wright,**
:00:06 17 **which says claim drafters use different terms all the time,**
:00:10 18 **that it has got different reasons for it. Just because you**
:00:11 19 **use different language in two places doesn't mean they can't**
:00:14 20 **mean the same concept. We have seen claim drafters write 50**
:00:20 21 **claims they cover the same thing 50 different ways.**
:00:22 22 **Curtiss-Wright says that doesn't mean anything. Let's make**
:00:25 23 **sense. Let's see what is logical.**

:00:28 24 **We have got logic here. The reason why the**
:00:30 25 **claim drafter did what he or she did, and I think we can**

:00:34 **reason, back it out, why they did what they did is, in Claim**
:00:38 **3 and some of the other dependent claims, they started**
:00:41 **wanting to manipulate the number of different signal points**
:00:47 **and how those would be handled. So as an antecedent basis,**
:00:52 **sort of a patent drafter formalism, they said, all right, we**
:00:55 **have to introduce the concept of 2N-dimensional channel**
:00:58 **symbol in so we can start playing with N. And so they**
:01:02 **said -- they didn't say, signal point doesn't mean that**
:01:05 **familiar signal point on the grid that we were talking about**
:01:07 **yesterday. They were just saying, okay, now we have to get**
:01:11 **into the bits and bytes and the details of 2N-dimensional**
:01:15 **channel symbols because we are now talking about what we are**
:01:17 **going to be doing with the N when we have different numbers**
:01:20 **of signal points.**

:01:24 **Rembrandt's third argument is that defendants'**
:01:26 **position is nothing more than an attempt to limit the claims**
:01:29 **to the preferred embodiment. I expected not to see that**
:01:32 **argument here today. It was in the brief heavy. It came**
:01:34 **back again. There it is in the brief. I don't know what**
:01:37 **else I can say, Your Honor, to be clear that we are not**
:01:40 **relying on the preferred embodiment. We are relying on the**
:01:43 **summary of the invention, in accordance with the present**
:01:46 **invention, how do you further enhance the 2N-dimensional**
:01:50 **channel symbols, the abstract, the prior art description.**
:01:56 **Every embodiment in the patent. How the technology works.**

:02:04 **And, yes, every single embodiment in the patent**
:02:06 **happens to show it, too. And there is not just one**
:02:09 **embodiment, they show 2, they show 4. There is a few**
:02:12 **different examples they give. In every case it is**
:02:14 **two-dimensional signal points. That is what it is.**
:02:17 **Now let's look at the competing construction.**
:02:21 **The competing construction, as with yesterday we**
:02:24 **saw, is basically pretty empty. It's a value that is**
:02:30 **transmitted. Well, a value is of concern. A value can be**
:02:34 **anything. This doesn't tell us what a signal point is. A**
:02:39 **signal point is on a two-dimensional signal constellation.**
:02:44 **That is the whole technology. It is a trellis encoder and**
:02:47 **you have these two-dimensional constellations. I don't have**
:02:49 **to get into the tedium of what all this math is, and we saw**
:02:52 **some of that, or what these different points mean.**
:02:55 **The fact is, that is what it is. I don't know**
:02:57 **what else to say. It is a two-dimensional signal**
:03:00 **constellation. It is a point on that constellation. The**
:03:04 **patent says it is. That is what it is.**
:03:05 **A value could be anything. There is no**
:03:07 **constraint on what a value could be. The room for mischief**
:03:11 **is endless.**
:03:13 **It has got to be a signal point in a signal**
:03:15 **constellation. It is not asking too much to say that it**
:03:19 **should be what it says it is.**

:03:23 **And they, in fact, rely, if you look at what the**
:03:25 **reliance is on where they say, what is a value, it says**
:03:29 **values representing the I and Q components of signal point**
:03:33 **A. What are the I and Q components? That is your two**
:03:38 **dimensions.**
:03:39 **So, Your Honor, we would ask that a signal point**
:03:42 **be defined to be what it is, a point on a two-dimensional**
:03:47 **constellation having a pair of coordinates representing two**
:03:50 **components of a corresponding signal. The primary point**
:03:54 **being that it's a point on the two-dimensional**
:03:59 **constellation.**
:04:00 **All right. Let's talk about the next group of**
:04:02 **terms.**
:04:06 **Now we are at one of the centerpieces of the**
:04:08 **patent, which is this concept of interleaving.**
:04:13 **You will see, you see that it's the same concept**
:04:15 **that shows up in a few places. The debate is simple. It**
:04:19 **doesn't need to be complicated unduly. It is whether the**
:04:22 **signal points that make up each symbol are adjacent before**
:04:25 **they are interleaved to become nonadjacent. Simple point.**
:04:31 **There is an additional issue that with**
:04:33 **interleaving the way we proposed it is that it's separating**
:04:36 **the adjacent signals, because that's going to be a little**
:04:39 **more friendly to a jury than interleaving adjacent signals.**
:04:43 **What it basically comes down to is taking**

:04:45 **adjacent signal points and separating them. And why? So**
:04:48 **that, as Mr. Sweeney accurately states, when you have a**
:04:50 **burst, they are separate and not all together. So you don't**
:04:53 **have a group of things together that are all destroyed at**
:04:56 **once, they are separated, or scattered is another word, or**
:05:00 **scrambled is another way to think about it.**
:05:04 **There is no doubt that the summary of the**
:05:06 **invention states the improvement, "the single point**
:05:10 **interleaving technique which causes the constituent signal**
:05:13 **points of the channel symbols to be nonadjacent as they**
:05:16 **traverse the channel."**
:05:17 **We will just go through. But that is central.**
:05:19 **That is in that first paragraph of the summary of the**
:05:21 **invention.**
:05:25 **Rembrandt, its presentation today was a little**
:05:28 **less, I thought, helpful than the brief. The brief**
:05:30 **actually, in the background section of their opening brief,**
:05:33 **had a lot to complain about. But it did a fairer job of**
:05:37 **identifying how this is an incremental build on the '625**
:05:40 **patent, that Betts himself, the inventor, was improving on.**
:05:44 **And here they stated -- this sentence sort of captures it --**
:05:49 **"The improvement of the '627 patent compromises augmenting,"**
:05:54 **as standing on the shoulders of giants, "augmenting the**
:05:57 **channel symbol interleaving technique disclosed in the '625**
:06:01 **patent with an additional technique called signal point**

**interleaving."**

**It is very simple. The '625 patent tells you about let's interleave the symbols so that we scramble them or separate them to prevent noise. We are going to add an additional technique on the back of that, which is, when you have multiple signal points making up a symbol, let's scramble those, too. In other words, it is all well and good to scramble the symbols, but let's scramble the signal points, too, so we benefit from this spreading concept even more.**

**They just talk about augmenting. It is an improvement on top, additional technique. And the patent speaks on this, too.**

**Let's show an animation to show how the patent actually works, because I thought a lot of what you saw before really didn't explain it. This is Figure 3. This is a simplification, as these always are. But I think it will be helpful in showing you the prior art and the claimed improvement.**

**So we have the pair of signal points that make up each of these symbols coming out.**

**Let's hold it there. Don't do anything.**

**We have three trellis encoders, blue, magenta, and green. Each one is producing these symbols. And the symbols are made up of a pair of single points. That is**

undisputed. And it could be more than two. Let's just take the two case. That is simple.

What the Betts patent said -- it is not that complicated -- is, if you just use one trellis encoder, what comes out is just this line where there is no interleaving, there is no spreading. And here you can see, this is precursor information for the symbols and signal points, because that doesn't happen until up higher. It shows the point anyway. What you are doing is you are not having two blues in a row because you are bringing them in 1-2-3, 1-2-3, in a round-robin style, so as they come up toward the signal point interleaver, which is what the claimed invention is about, you have the symbols already interleaved.

So this is old as the hills. This is in Betts, if Betts even invented that. There is prior art to him as well.

And the patent is, frankly, very up front itself about it. It was more obscure today. But this isn't us. We didn't add this. This is what we are building on. Okay. Let's see what they built on.

They then said, now that we have put these two signal points together, let's spread them, too. If the idea is good to scramble them and spread it, let's do that, too, so these little blocks, the building blocks, are spread,

:08:31 **too. That's signal point interleaving.**

:08:34 **And this isn't stuff -- I am not piecing**
:08:36 **together an argument. It is called the signal point**
:08:39 **interleaver. And that down there is the switching circuit.**
:08:43 **And that is the two stages of interleaving. There was a lot**
:08:46 **of complexity this morning on what the patent is about. It**
:08:49 **is actually relatively simple. The '625 patent says we**
:08:52 **interleave the symbols. And the '627 patent says, well,**
:08:58 **wouldn't it be a good idea when we have more than one signal**
:09:01 **point making up a symbol to also after that interleave**
:09:06 **those?**

:09:07 **And Figure 5 is really helpful in thinking about**
:09:10 **this, because there is Row 1, which is not interleaved one**
:09:15 **trellis stage. It shows the symbols, they are called 4D,**
:09:20 **which is what I told you about before, which is that there**
:09:22 **is two signal points, each of two dimensions. And X's are**
:09:26 **the signal points. So this tells the same thing that I have**
:09:30 **been saying all along. It shows the adjacent signal points**
:09:33 **that make up each symbol. And there is one trellis stage.**
:09:36 **So this isn't even using the Betts prior art. This isn't**
:09:41 **even using the '625, Figure 5. This is just if we have one**
:09:46 **trellis encoder with everything going through, we are not**
:09:48 **trying to interleave in anything. Symbol; symbol; symbol.**
:09:49 **Signal point; signal point; signal point.**

:09:52 **Two is Betts, the '625 patent, the prior art**

:09:55 **patent. There it says, okay, we have three, those are the**
:10:00 **color coding there, three symbols made up of two signal**
:10:05 **points that are adjacent each. We don't have to guess that**
:10:07 **they are adjacent. By seeing them ourselves with our eyes,**
:10:10 **the patent tells us in words, in one syllable or two, symbol**
:10:16 **points of each symbol operated on by a particular trellis**
:10:20 **encoder stage are adjacent in the output signal point**
:10:23 **stream.**
:10:23 **It says it right in there. It says it more than**
:10:26 **once, for that matter.**
:10:28 **It just makes sense. The constituent signal**
:10:31 **points of each symbol are by their very nature initially**
:10:35 **adjacent. You had Rembrandt concede that the symbol is made**
:10:38 **up of the two signal points. Those are the building blocks.**
:10:41 **That is the symbol. If you took the two building blocks**
:10:44 **away, you would see nothing. The signal points are the**
:10:46 **symbol. You don't have a symbol unless the signal points**
:10:49 **are there. They are together.**
:10:51 **Taking my word for it? No. This is the patent.**
:10:55 **It shows them together coming out of the encoder. That is**
:10:58 **where the signal points are actually made, because you need**
:11:01 **index values to do it. That is a detail that we can talk**
:11:04 **about later as it comes up. The main point right now is**
:11:07 **that they are adjacent. They are shown in the patent as**
:11:09 **adjacent. They are described in the patent as adjacent.**

:11:12 **Obviously, they are adjacent.**

:11:13 **Here is a blowup, Figure 3, right there, you**
:11:16 **won't hear otherwise from Rembrandt. In this drawing which**
:11:20 **you didn't see, Figure 3, which is described in the**
:11:23 **invention, there is a lot of made-up drawings, but you**
:11:25 **didn't see the drawings from the patent that showed how the**
:11:29 **invention works. Right there, every single one of them**
:11:31 **adjacent.**

:11:32 **Now, interestingly, again, I think they have**
:11:34 **evolved their presentation. In their own brief, they showed**
:11:38 **drawings to the Court that explain how that stuff works,**
:11:41 **they showed you symbols made up of two signal points**
:11:48 **adjacent. This is, again, not a defendants' presentation.**
:11:50 **This is Rembrandt before you interleave, so that here they**
:11:53 **are acknowledging -- the brief is much more helpful,**
:11:57 **frankly. Here they are acknowledge it. They are saying,**
:11:59 **okay. Before you do the interleaving, after you do the**
:12:02 **Betts switching, where you get the symbol interleaved, red,**
:12:06 **yellow, green, you do the single point interleaving, which**
:12:11 **is the invention, and there you get the signal points**
:12:14 **themselves separated.**

:12:15 **Well, voila. The signal points are adjacent**
:12:19 **before interleaving. This is their joint appendix at B-13,**
:12:23 **not our drawing, although it's a good one for us.**

:12:29 **Bottom line, Your Honor, it makes no sense to**

:12:32 **interleave the constituent signal points that make up each**
:12:36 **symbol unless they are first adjacent.**
:12:41 **The mischief to this, to be honest with you, is**
:12:45 **they want to fudge symbol and signal point to call things**
:12:48 **that are just symbols that are all independent and have no**
:12:50 **relationship. Signal point, there is one signal point,**
:12:53 **there is another signal point, they are from the same**
:12:55 **symbol. But that's not how it works.**
:13:02 **Again, let's not shy away from the criticisms.**
:13:05 **Let's take them dead-bang on. Three of them.**
:13:07 **Claims do not require adjacency. This is all**
:13:11 **about the output. They talk about nonadjacency. They never**
:13:14 **say the word adjacent.**
:13:15 **The channel symbols are already interleaved, we**
:13:18 **will get to that in a second. And signal points can be**
:13:20 **generated and interleaved at the same time. I have heard it**
:13:23 **now "about the same time," "sort of the same time."**
:13:26 **First, the claims do not state expressly that**
:13:28 **the constituent signal points of each symbol are adjacent.**
:13:32 **That is the argument. Where do you see that? You see that**
:13:34 **nowhere in the claim, that kind of argument.**
:13:37 **The inventors were well-aware of the term**
:13:39 **adjacent.**
:13:42 **It proves too much, Your Honor. All the time**
:13:44 **courts are asked to construe claims and what they mean.**

:13:46 **Here we are asking you to acknowledge what should be**
:13:49 **noncontroversial but is necessary to change their**
:13:53 **infringement theory that the signal points that make up the**
:13:56 **symbols have to be interleaved to be rendered nonadjacent.**
:14:00 **That is the problem that the patent was trying to solve.**
:14:03 **You will remember the quote where it says,**
:14:04 **before the interleaving they are adjacent, after the switch,**
:14:08 **because Betts doesn't interleave the signal points, Betts**
:14:12 **only interleaves the symbols.**
:14:13 **The Nystrom case, the broad term board was used.**
:14:16 **The argument was made, it doesn't say wood anywhere in the**
:14:19 **claim. The Court said, look, this is all about wood. And**
:14:22 **even though there is claims that talk about wood decking**
:14:25 **board, we are still going to require the board to be wood**
:14:29 **because that's what the patent makes clear.**
:14:31 **That is logic that proves way too much. It's**
:14:34 **claim construction. That's what we are doing now. And they**
:14:37 **don't even deny that we need to construe what this means.**
:14:45 **Now, Rembrandt acknowledged this in their brief.**
:14:49 **It says, "In fact, however, trellis encoding of the channel**
:14:52 **symbols partially removes some of the adjacency by**
:14:55 **interleaving the channel symbols."**
:14:57 **The old '625 Betts patent. That solution to**
:15:02 **reducing adjacency, Betts's old idea, however, is**
:15:06 **inadequate.**

**Now this is the big show-stopper of their invention, described by Rembrandt. That inadequacy, i.e., the need to further reduce the adjacency, is what the '627 patent solves by removing the remaining adjacency by interleaving the signal points. They are acknowledging adjacency there. And they are also being clear about the two-stage -- there was a lot of effort today to conflate the two stages of interleaving, to confuse the symbol interleaving with the signal point interleaving. Their brief doesn't confuse it.**

**Their second argument is that the signal points are already nonadjacent because the channel symbols are interleaved. So they are arguing, wait, it's already nonadjacent because the channel symbols have already been rendered non- -- the symbols themselves have been interleaved, so from symbol to symbol you have got interleaving. Partially removed some of the adjacency by interleaving the symbols.**

**That is not the central feature of the patent. That is the central feature of the prior art. We are not ignoring that at all. So as it comes to the signal point interleaver, you already have the interleaved symbols. The signal point interleaver doesn't need to do that work. The means for interleaving signal points, the signal point interleaver, obviously, it doesn't need to do the work of**

**interleaving signal points from symbol to symbol. That was done in the prior art by Betts.**

**Here we show Figure 5 from the patent. Note that the signal points of each channel symbol operated on by a trellis encoder stage are adjacent in the output signal point stream.**

**We acknowledge that from symbol to symbol there is already interleaving. I don't know what the issue is there. We are fine with that.**

**The point is that the signal points that make up the symbol have to be interleaved, because that's what the patent is all about.**

**The way they attempt to get around that is this compressing together the two concepts.**

**Rembrandt's third argument is that the signal points can be generated and interleaved at the same time. And they made it in their brief. Now it's sort of getting a little squishier. What is that about?**

**There is no way that the claim language can tolerate that argument. And you heard it from Mr. Sweeney. What you do is you generate the stream of trellis encoded channel symbols. And then you interleave the signal points of the generated channel symbols.**

**Their argument is, at the same time that you are generating the channel symbols, you are also interleaving**

:17:50 **the signal points and you are mushing it all together and**
:17:52 **doing it all at once, which is nothing that is shown in the**
:17:55 **patent. It can't happen.**
:17:56 **First you get the symbols, you get your**
:17:59 **plurality of streams, that's the interleaved streams, and**
:18:02 **then the means for interleaving is of the generated channel**
:18:07 **symbols that already exist. There is no generating and**
:18:10 **interleaving at the same time. The claim just can't**
:18:13 **tolerate it. It is a two-stage.**
:18:16 **Here it is. There is no disclosure generating**
:18:19 **interleaving, the familiar thing. You have got the three**
:18:22 **trellis encoders, the switching circuit, interleaves them,**
:18:24 **you come from the signal point interleaver to take each**
:18:27 **symbol and does the interleaving work on that.**
:18:33 **So here Rembrandt's construction fails because**
:18:37 **they don't acknowledge the adjacency requirement.**
:18:43 **Rembrandt's only support, if you look, what do**
:18:48 **they rely on up to this point that there is no adjacency**
:18:51 **necessary? What they ignore is that the specification does**
:18:54 **not eliminate the possibility that the signal points are**
:18:56 **generated already interleaved.**
:18:59 **What? We just already showed that the**
:19:02 **interleaving is of the generated channel symbols. Well, the**
:19:06 **signal points are within, they comprise the, the signal**
:19:10 **points comprise the channel symbol. There is no way that**

:19:12 **the generated symbols that prevent interleaving, that is all**
:19:16 **done at the same time. And they say, they ignored the**
:19:18 **specification does not eliminate the possibility. That is**
:19:22 **weak. The claims eliminate the possibility. Maybe that's**
:19:26 **the way to harmonize it all.**
:19:29 **The fact is that the symbols are already created**
:19:33 **and generated by the time they get to the interleaver, where**
:19:36 **the work that remains to be done is interleaving the signal**
:19:38 **points that make up each symbol.**
:19:42 **And then the obvious point, the single point**
:19:45 **interleaving technique which is added to the prior art**
:19:47 **causes the constituent signal points of the channel symbols**
:19:50 **to be nonadjacent as they traverse the channel.**
:19:55 **Let's look at interleaving. This is whether to**
:19:59 **be explained to the jury. Our point was, on separating, you**
:20:02 **could use scrambling, you could use other concepts. And the**
:20:06 **patent describes it as separating. It's very obvious from**
:20:11 **this drawing.**
:20:14 **Here is the whole of Figure 5. When you start**
:20:17 **drilling into the patent you realize that Figure 5 teaches**
:20:19 **you a lot, because it describes one is doing nothing. That**
:20:23 **is a single trellis encoder, no interleaving anything. Row**
:20:28 **2 is interleaving the symbols. And Row 5 is the patent,**
:20:35 **claimed invention of also interleaving signal stages. And**
:20:39 **this shows one and two trellis.**

:20:45 **Let's get to their final two criticisms on interleaving, which is that our construction fails to interleave signal points among successive channel symbols, and our construction fails to interleave signal points belonging to a single channel symbol.**

:21:00 **Their first argument is that our construction fails to interleave signal points among successive channel symbols.**

:21:09 **That is already accomplished by the prior art. The symbols themselves have adjacent signal points, and they have been interleaved. The signal point interleaver of Figure 3 isn't interleaving symbols. It is only interleaving signal points. Even their lexicon is that the switching circuit is the signal point interleave.**

:21:33 **Now, the remainder of the asserted claims -- this is the last point that they make. The single point of adjacent symbols in any one of said channel symbol streams are not adjacent. So there is really -- let me get to the next point.**

:21:51 **Their second argument is that defendants' construction fails to interleave signal points belonging to a channel symbol. This is the A, B, C, D that you saw. This is like, if you have four jurors, let's continue with the juror example, saying there is four jurors adjacent, saying we want to render them nonadjacent. And the argument**

:22:07 **they would say is that makes no sense because the first one**
:22:10 **and the fourth one aren't adjacent at the outset. You would**
:22:14 **know what it says to say we have got four jurors that are**
:22:17 **adjacent, let's make them nonadjacent. That is, you would**
:22:20 **treat the first and second adjacent, second and third**
:22:22 **adjacent, the third and fourth adjacent. And you would**
:22:25 **spread them out. It is treating them as a group. Only when**
:22:28 **you parse it down does it not make sense.**
:22:30 **When you look at it as 1, 2, 3, and 4 are all**
:22:34 **adjacent, make them nonadjacent, that semantic quibble goes**
:22:36 **away.**
:22:37 **You take the signal points of a channel symbol**
:22:39 **and you interleave them to make them nonadjacent. Even if**
:22:43 **there is four of them, you can do that.**
:22:50 **Here is that point.**
:22:56 **What I think I am going to get back to on the**
:22:58 **claim here, the second one, it says the signal point of**
:23:02 **adjacent symbols in any one of said channel symbols --**
:23:08 **excuse me. "The signal points of adjacent symbols in any**
:23:11 **one of said channel streams are nonadjacent." And that's**
:23:11 **their point, which will come up in the means-plus-function,**
:23:18 **that needs to be understood.**
:23:18 **They are saying, well, the interleaving of the**
:23:20 **signal points also has to do the work of taking the signal**
:23:22 **points from adjacent symbols and also making them separate.**

:23:25 **And that had me thinking a little. What does that mean?**
:23:30 **Why is that so? That doesn't seem right, since there is a**
:23:34 **signal point interleaver. The answer is, the way this claim**
:23:36 **is drawn, what you have to do is when you are interleaving**
:23:38 **the signal points within each symbol, you can't mess up what**
:23:41 **was done in the prior art with the switch. In other words,**
:23:44 **what it is saying is, interleave the signal points of the**
:23:47 **generated symbols. You have the symbols already. Said**
:23:50 **interleaving being carried out in such a way that the signal**
:23:53 **points of each channel symbol are nonadjacent. Okay, the**
:23:56 **signal points come in adjacent. We render them nonadjacent.**
:23:59 **That is the single point interleaver's main work. We**
:24:02 **understand that. In said stream of trellis encoded signal**
:24:05 **points, and such that the signal points of adjacent symbols**
:24:08 **in any one of said channel streams are nonadjacent. The**
:24:10 **nonadjacency there is not being achieved by the interleaver**
:24:13 **of the signal point.**
:24:14 **It is just saying, don't mess it up. When you**
:24:16 **start scrambling things around, when you take the per symbol**
:24:20 **single points and you spread them, which is the whole point**
:24:23 **of the patent, don't mess up what was done in the prior art**
:24:26 **with the channel symbol. So leave it, so that interleaving**
:24:30 **is performed, so that you are not taking the adjacent signal**
:24:33 **points that would be otherwise adjacent from symbol to**
:24:36 **symbol, you are not putting them together. So that's a "do**

**no harm," that last point, saying we have already done the interleaving of the symbols, do no harm, but what we need to do with the signal point interleaver is to make them nonadjacent. That is the whole point of the patent.**

**Okay. Deinterleaving is restoring the adjacency of the separated signal points. If you accept that the signal points of each trellis encoded symbol, because that is the work that is being done, it is the per symbol adjacency that you are worried about in the signal point, just restoring that, if you accept that for the last argument, you will accept it here, and it makes sense for all the reasons just described.**

**Okay. Means for interleaving. I actually think this is the easiest to understand and the most of a reach by Rembrandt. They argue that the signal point interleaving, means for interleaving signal points of said generated channel symbols, everyone agrees on the function, what is it in this patent that does the interleaving the signal points? It is the signal point interleaver. And both sides agree with that. Obviously, that's not really subject to legitimate dispute.**

**What Rembrandt does is it says, or the switching circuit. That's the prior art switch, or the processor programmed.**

**Here is the single point interleaver, everyone**

:26:11 **agrees, that makes sense, we saw how it works. It is really**
:26:14 **not subject to debate. That does the signal interleaving,**
:26:18 **then you have the single point interleaving, the signal**
:26:23 **point interleaver.**
:26:24 **Rembrandt argues that the switching circuit down**
:26:25 **here can be the corresponding structure for signal point**
:26:29 **interleaving of channel symbols? Are you kidding? How is**
:26:32 **that possible that the old switch that Betts had that told**
:26:36 **you to take the symbols and interleave them could do the**
:26:41 **signal point interleaving? And we are not even talking**
:26:43 **about claim construction generally. This is corresponding**
:26:46 **structure for how the patent actually works.**
:26:48 **They didn't show you Figure 3. There was no**
:26:51 **effort to really show you what was performing the function**
:26:54 **in the patent. I showed you all the text as well. And I**
:26:57 **showed you their briefs, which showed it as well. That**
:27:00 **switch only interleaves the symbol information. It doesn't**
:27:07 **signal point interleave. There is no straight-faced**
:27:12 **argument that it does, to be candid, Your Honor.**
:27:17 **There is nothing in the specification that links**
:27:19 **the switching circuit to interleaving the signal points.**
:27:22 **That should be obvious enough. And again, here is their**
:27:27 **quote from their own brief. "Augmenting the channel symbol**
:27:33 **interleaving technique disclosed in the '625 patent with an**
:27:35 **additional technique." This is that old prior art patent,**

:27:37 **the '625 patent. That is not extrinsic or anything else.**
:27:40 **That is referred to right, square, flat, extended, remember,**
:27:44 **we talked about the columns in the patent.**
:27:45 **Switching circuit, four trellis encoders, what they call**
:27:49 **symbol point interleaving technique. That takes the signal**
:27:52 **points from within the symbol and does the interleaving?**
:27:55 **How are they going to defend that?**
:28:06 **I just walked you through that point. Here**
:28:08 **again the patent talks about how it works, so there is**
:28:11 **Figure 5 and Figure 3. These are the core figures of the**
:28:13 **patent that were meticulously avoided this morning with**
:28:17 **Rembrandt 2008 drawings. It shows the symbols interleaved**
:28:21 **by the switching circuit. If you look at the text of the**
:28:24 **patent, you will see that is exactly what Row 2 shows. No**
:28:28 **signal point interleaver accomplished. Not interleaved is,**
:28:32 **in fact, what it says. Not interleaved. Means for**
:28:35 **interleaving. Not interleaving. Constituent signal points**
:28:38 **of each symbol interleaved by signal point interleaver.**
:28:41 **That is Row 5. That is how the claimed invention works.**
:28:46 **Now you have the signal points interleaved. That is**
:28:49 **corresponding structure, the single point interleaver.**
:28:54 **And then, as if that isn't enough of a reach,**
:28:57 **they go further. They say, or a processor, sort of**
:29:01 **anything, processor, program, interleave.**
:29:06 **This paragraph we have seen a lot at the bottom,**

:29:08 **it says, "It will be appreciated although various**
:29:11 **components -- those skilled in the art will recognize that**
:29:14 **the function of any one of these elements." This isn't**
:29:16 **saying the single point interleaver which we just told you**
:29:19 **is the core of our invention. It is saying any of the**
:29:22 **elements can all be done in processors. That is a pretty**
:29:27 **nebulous disclosure. That is patent lawyer -- that is**
:29:28 **catchall.**
:29:31 **It's not as though it says, oh, that signal**
:29:34 **point interleaver that is the heart of how we are different**
:29:36 **from the Betts stuff that went in the past, that can be done**
:29:39 **in the processor, they don't say anything like that. This**
:29:41 **is corresponding structure with the function that's tied**
:29:43 **together.**
:29:44 **You don't have to take my word that that is**
:29:46 **insufficient. Finisar says, if you are going to do that**
:29:49 **kind of thing for a means-plus-function 112(6), you have to**
:29:53 **have enough of an algorithm to provide the structure. In**
:29:55 **other words, you have to say here is a processor that would**
:29:58 **do the interleaving by taking X1, alpha, gamma and mix it**
:30:02 **with X2, alpha, whatever.**
:30:04 **Again, the Aristocrat case. This is consistent.**
:30:07 **Yes, there is a little panel dependency. But you can't just**
:30:11 **kind of throw in that kind of loose language, anything in**
:30:15 **the patent can be done in the processor, and say that is**

:30:17 **corresponding structure to the core function of the whole**
:30:19 **patent, because you don't have it disclosed or clearly**
:30:22 **linked, which is the requirement under the legal standard.**
:30:28 **Means for deinterleaving. Same problem. They**
:30:31 **want the switching circuit on the receive side to be the**
:30:33 **single point deinterleaver. It's the same exact problem.**
:30:38 **It makes no sense.**
:30:41 **All right. Last term for me, Your Honor, is**
:30:43 **means for generating a plurality of streams. This is a**
:30:51 **debate. We set forth very specific structure, parallel**
:30:55 **trellis encoder and an encoder that generates the signal**
:30:59 **points. And Rembrandt, although they used a lot more words**
:31:03 **to do it, used this phrase a distributed trellis encoder.**
:31:07 **Well, we are talking about corresponding structure, not just**
:31:10 **claim construction. So what are you talking about when you**
:31:13 **say distributed trellis encoder?**
:31:14 **During the meet-and-confer, we said, what is**
:31:16 **that box 471? What is it? We were very clear. The**
:31:23 **corresponding structure for generating this channel symbols,**
:31:28 **are the three trellis encoders, 319 -- this is Figure 3, the**
:31:33 **key figure in the patent -- and then the QAM encoder.**
:31:42 **One thing on that, Your Honor, is the way this**
:31:44 **thing works is that some of the information to make the**
:31:46 **signal points and symbols comes through the trellis encoder**
:31:49 **and others of it go through the modulus converter, and then**

:31:52 **they converge at the QAM encoder. I am not going to get**
:31:56 **into the tedious detail of that. The QAM encoder is where**
:31:59 **it comes together, where you actually get actual signal**
:32:03 **points and symbols being created in their real form because**
:32:06 **they need that additional information.**
:32:08 **The way I would look at it is the precursor**
:32:11 **information is what is going through.**
:32:13 **But that is not debated, because what Rembrandt**
:32:16 **argued is, the patent specification discloses alternative**
:32:21 **embodiments for the means for how you generate the symbols.**
:32:24 **It teaches those skilled in the art that any one or more**
:32:28 **elements can be implemented with any appropriate technology,**
:32:30 **with any appropriate -- anything, anything, anything. Not**
:32:33 **what's actually disclosed in the patent.**
:32:36 **A bare statement, if there is known techniques**
:32:39 **so that you can use anything, anything, anything, isn't**
:32:42 **enough.**
:32:43 **Their construction is just terribly and**
:32:46 **perniciously vague. We told them what we thought the**
:32:48 **distributed trellis encoder was and is, as a matter of fact.**
:32:52 **They didn't dispute that, which is an important point and**
:32:55 **makes your job easier.**
:32:58 **They say, our construction is parallel trellis**
:33:01 **encoders within an encoder that generates the signal point.**
:33:05 **That is that QAM. And they say this construction is only**

:33:07 **one example of a distributed trellis encoder set forth. But**
:33:11 **they never say what the other example is. I assume maybe it**
:33:14 **is that boilerplate at the end. Distributed trellis encoder**
:33:19 **is an abstract concept. It has to be a structure in the**
:33:24 **patent to be corresponding structure. What is it?**
:33:27 **For that reason we think it is a parallel**
:33:30 **trellis encoder that generates a signal point, as shown in**
:33:33 **the patent, the distributing trellis encoder and the QAM.**
:33:38 **That is it, Your Honor.**
:33:39 **Before I sit down, the Texas ruling was on every**
:33:42 **slide that showed the claim constructions. There was even**
:33:46 **reference to it. Do I need to address that further?**
:33:49 **THE COURT: Why don't you.**
:33:52 **MR. REINES: Your Honor, Rembrandt from the**
:33:54 **outset has argued that the claim terms of the suit were**
:33:58 **previously construed in Texas. They referred to Comcast**
:34:02 **rulings. The TV networks weren't involved in that at all.**
:34:05 **What issues were in the mind of Comcast I don't know.**
:34:09 **This Court vacated that opinion, as the Court**
:34:12 **knows. They wanted to reinstate it as an objection period**
:34:15 **at the CFC, you will recall. And you said we are doing it**
:34:20 **anew and we are doing it de novo, and stop with that**
:34:24 **argument.**
:34:27 **The stare decisis argument seems to have gone**
:34:30 **away, because there was no appeal to Judge Ward, and it's**

:34:35 **vacated anyway. So we thought that we didn't need to be**
:34:41 **debating the niceties of what was done in Texas, where some**
:34:44 **of the terms weren't even at issue. So we didn't include**
:34:47 **that in our analysis.**
:34:49 **I think we have told you in a de novo fashion**
:34:53 **why we think we are right on the claim terms that, for**
:34:55 **example, I just addressed. And any stare decisis or**
:35:01 **precedential effect is unwarranted.**
:35:02 **That was, incidentally, Magistrate Judge**
:35:06 **Everingham is an eminent jurist, that was about his second**
:35:08 **or third claim construction ever on the Bench, because he**
:35:11 **was newly appointed. Your Honor has been on the Bench and**
:35:14 **handled numerous cases like this. And we have all the**
:35:16 **confidence in you handling it de novo.**
:35:19 **THE COURT: Thank you, Mr. Reines.**
:35:20 **MR. REINES: Thank you.**
:37:04 **THE COURT: Okay.**
:37:07 **MS. JACOBS LOUDEN: Your Honor, one additional**
:37:09 **point before Mr. Benyacar begins, about the question of the**
:37:12 **Texas ruling. On behalf of Comcast, we would just like to**
:37:16 **point out that the Magistrate Judge's ruling was appealed,**
:37:19 **and that was the state of affairs when the Multi-District**
:37:23 **Panel took the case, and then Your Honor subsequently**
:37:25 **vacated the Magistrate Judge's ruling.**
:37:28 **THE COURT: Okay, thank you, Ms. Jacobs Louden.**

:37:31 **MR. BENYACAR: Your Honor, may I approach?**

:37:33 **THE COURT: Please do.**

:37:47 **MR. BENYACAR: Your Honor, as Mr. Reines mentioned, I will be addressing the trellis encoded channel symbol, the turbine decoder, and receiver apparatus terms. And I would like to start with the trellis encoded channel symbol term now. It's a very technical-sounding term. The parties agree that it needs to be construed. It can't be read to the jury.**

:38:07 **But I think that the issue in dispute and the nature of the dispute are relatively discrete and crystallized. What the claim term calls for is one trellis encoded channel symbol, a trellis encoded channel symbol that is comprised of a plurality of signal points.**

:38:28 **As you heard from Mr. Sweeney this morning and Mr. Reines before, the patent says that it is prior art to interleave signal points that are not part of the same symbol. The invention is interleaving signal points that are part of the same symbol. So it's critical in this case to be able to establish when are two signal points part of the same symbol and when are they not part of the same symbol.**

:38:57 **Our construction has three real steps. The parallel loop input bit is expanded, wants to select the signal points. But they all relate to one issue, which is**

:39:09 **symbols, whether they have one signal point or multiple**
:39:15 **signal points, are known in the art to be selected by one**
:39:18 **expansion of a trellis encoder. Every example in the patent**
:39:22 **is that. Every example in the patent is parallel input bits**
:39:26 **expanded once to select the symbol. Every piece of prior**
:39:30 **art is that, including Mr. Betts's own '625 patent, other**
:39:34 **prior art, the fellow that Rembrandt says is the pioneer of**
:39:40 **these types of symbols, Li Fang Wei, all of the extrinsic**
:39:44 **evidence and extrinsic evidence is completely supportive of**
:39:48 **our constructions, as we will see.**
:39:50 **Rembrandt's only argument that you heard this**
:39:52 **morning is, we are trying to limit them to the preferred**
:39:55 **embodiment. There is no disclosure in the record of any**
:40:00 **reference, intrinsic or extrinsic, that does anything else.**
:40:04 **And there is certainly no reference or disclosure of**
:40:06 **anything that supports this group of bits that is treated as**
:40:09 **a unit by an encoding system. That is completely fanciful.**
:40:13 **It doesn't come from the patent. It doesn't come from**
:40:15 **anywhere in the intrinsic record or extrinsic record. It is**
:40:18 **also vague, and it doesn't help you define the critical**
:40:21 **issue in this case, which is how do you distinguish two**
:40:25 **signal points that are part of the same symbol as opposed to**
:40:29 **two signal points that are not part of the same symbol?**
:40:37 **Now, you have seen Mr. Sweeney and Mr. Reines**
:40:41 **earlier at various times show portions of Figure 1 and**

:40:44 **Figure 3. For purposes of this discussion, I can focus only**
:40:47 **on a very small subset of those components: the**
:40:53 **serial-to-parallel converter and the trellis encoder. And I**
:40:55 **have a board up that just shows those two components,**
:40:58 **because this process is consistent to every embodiment in**
:41:01 **the patent, the prior art and the inventive embodiment of**
:41:05 **Figure 3, because it's the operation of the trellis encoder,**
:41:08 **the one expansion that defines what is a symbol and how many**
:41:13 **symbol points there are in a symbol. We will go over that**
:41:16 **row from the patent.**
:41:18 **So I just want to show, this is the essence of**
:41:20 **our construction.**
:41:22 **There are parallel input bits to the trellis**
:41:25 **encoder, meaning those bits go into the trellis encoder**
:41:29 **together. The trellis encoder performs one expansion on**
:41:33 **those input bits, and you see it adds one bit at the bottom,**
:41:39 **and that that one expansion generates the two or more signal**
:41:44 **points.**
:41:44 **That is our construction.**
:41:46 **Now, before I get into this, Mr. Sweeney alluded**
:41:49 **to something that was in their brief. They say, well, okay,**
:41:52 **we don't have anything, in essence, that says more than one**
:41:57 **expansion. But there is a reference, this Wei reference, he**
:42:01 **has example after example of one expansion generating one**
:42:06 **expansion bit. And at the end of the paper he just says,**

:42:09 **oh, by the way, with one expansion you can generate more**
:42:12 **than one expansion bit if you want.**
:42:15 **That is one expansion operation generating more**
:42:17 **than one expansion bit.**
:42:19 **That is a complete red herring, because our**
:42:21 **construction is not limited to the number of bits that's**
:42:23 **created by the one expansion. It just requires the one**
:42:27 **expansion.**
:42:28 **I just want to get that out of the way at the**
:42:30 **beginning, because I am going to show a lot of examples from**
:42:33 **the patent and the prior art, and they are all one expansion**
:42:36 **bit, because that's the way everybody does it. And even Wei**
:42:39 **didn't show an example of doing it. He just said**
:42:42 **theoretically you could. I just wanted to put that straw**
:42:46 **man out of the way.**
:42:49 **The first step in this three-step process is**
:42:52 **parallel input bits to the trellis encoder. The description**
:42:58 **of the generalized prior art case of trellis encoders show**
:43:02 **parallel input bits to the trellis encoder. This is the**
:43:04 **Figure 1 case that you have heard discussion about a little**
:43:07 **this morning. You see in the yellow, there is a**
:43:11 **2N-dimensional trellis encoder. That is not the specific 4D**
:43:15 **trellis encoder that is shown in Figure 3. That is the**
:43:17 **generalized case. And it is described as operating on**
:43:20 **parallel input bits.**

:43:25 **Figure 3, which is the invention, the purported**
:43:30 **invention embodiment, has that same serial-to-parallel**
:43:35 **converter supplying parallel input bits to the trellis**
:43:37 **encoder.**
:43:38 **So you see in Figure 1 and Figure 3 there is a**
:43:42 **red box, that serial-to-parallel converter. That is there**
:43:46 **for only one reason in every embodiment. It takes what are**
:43:49 **serial bits going in and it converts them to parallel.**
:43:53 **That's the only reason it's there. And that is because**
:43:56 **trellis encoders operate on parallel bits.**
:44:10 **And I just show this because, lest anyone think**
:44:15 **this is not right from the patent, you see, Figure 1 and**
:44:19 **Figure 3 show this as one line. But I have shown it as**
:44:22 **three lines here, because the patent says on the right, even**
:44:25 **though I am showing it as one line, when it is parallel,**
:44:28 **those in the art will appreciate that there are separate**
:44:31 **leads, one for each parallel pit. So this is the embodiment**
:44:35 **of Figure 1 and Figure 3 and every embodiment in the patent.**
:44:42 **It's not just the patent, even though every**
:44:44 **embodiment in the patent is parallel bits. The prior art**
:44:47 **shows it, too. This is Mr. Betts's prior art '625 patent**
:44:51 **which you have heard reference to by both Mr. Sweeney and**
:44:54 **Mr. Reines this morning. That's cited in the '627 patent**
:44:59 **itself, which shows the trellis encoder operating on**
:45:02 **parallel bits, which I show in red.**

:45:07 **So all of the intrinsic evidence and all of the**
:45:12 **extrinsic evidence shows that trellis encoders operate on**
:45:16 **parallel bits. That's the first step of our construction,**
:45:18 **because that's what trellis encoders do.**
:45:23 **Let's talk about this second step, expanded**
:45:31 **once. Now, Mr. Sweeney said this morning, well, this is**
:45:34 **ambiguous because it's not clear if it is one or more. We**
:45:37 **thought it was clear, it's once, it's one expansion.**
:45:43 **Again, Mr. Sweeney admits that all the examples**
:45:48 **in the patent are one expansion.**
:45:50 **So, in the case where, the prior art case where**
:45:56 **symbol contains one signal point, the patent says at the**
:45:59 **top, you take one of the input bits and you expand it to**
:46:03 **two. Now, Mr. Sweeney explained this morning what expansion**
:46:06 **means. What these trellis encoders do is take the parallel**
:46:10 **input bits, they add what are called redundant or expansion**
:46:13 **bits for the purposes of doing error correction. And we**
:46:17 **will see, those are performed in one operation. And in the**
:46:20 **patent, in the prior art case, where you have a symbol with**
:46:24 **one symbol point, the patent says you take one input bit and**
:46:28 **you expand it to two.**
:46:30 **In the example of symbols with more than one**
:46:35 **signal point, the patent says you take three parallel input**
:46:38 **bits and you expand them to four. That's what I showed a**
:46:42 **minute ago. There is no dispute by the parties that these**

:46:44 **examples are one expansion.**

:46:48 **By the way, I should point out here, Mr. Sweeney said we are limiting them to exactly the preferred embodiment. That is not true. We are not saying it has to be three parallel inputs to four or that it has to be six to seven. That's not our construction. There does have to be just one expansion, though.**

:47:29 **So this is the example of the patent. And I have drawn a dashed box around the trellis encoder because I just want to show for a moment what the trellis encoder does, how it expands once and why the parallel input bits limitation is important.**

:47:45 **Now, unfortunately, the inventors knew that trellis encoding was old. So when it came to what was going on inside the box, they point you to the prior art. They say, well, trellis encoding is old. Betts cites his own prior art '625 patent for what a trellis encoder does.**

:48:05 **So they point you to the prior art. But all of the prior art and all of the art currently before the Court is consistent in terms of what I am about to show.**

:48:15 **Here, I have taken, I tried to look inside the box, with one example. And you see those boxes at the bottom, which are delay elements. Mr. Sweeney showed an example of that this morning. This is another example. But for purposes of this discussion, we can abstract that,**

:48:35 **because it's just logic to do exactly what Mr. Sweeney said,**
:48:39 **which is, whatever configuration that logic is, the reason**
:48:45 **why they are all there is to generate an expansion bit by**
:48:49 **performing one operation on the parallel input bits. That's**
:48:52 **why they are there. And they all work essentially how I am**
:48:57 **about to show you.**
:48:58 **So in the example of the patent, where you take**
:49:00 **three input bits to four, you apply the three input bits to**
:49:04 **the trellis encoder. Those parallel input bits are operated**
:49:10 **on together by the logic, which is why they had to go in in**
:49:14 **parallel, because they are operated on together by the**
:49:16 **logic. And you see those yellow lines and you see this in**
:49:19 **many of the references that are in the record. Go down to**
:49:23 **the logic. The logic uses those parallel input bits**
:49:27 **together to calculate what that expansion bit should be.**
:49:33 **I have showed examples from two of the prior art**
:49:36 **references, including Mr. Betts's own '625, that show**
:49:41 **exactly that type of operation. You see the lines going**
:49:43 **down to the logic. The logic uses it to generate the**
:49:46 **expansion bit in one operation.**
:49:53 **Now, what's done with those parallel input bits**
:49:59 **as they have been expanded once? They are used to select**
:50:03 **all of the signal points that make up the symbol. That is**
:50:06 **the distinguishing characteristic between a symbol that has**
:50:11 **two signal points and the same two signal points that are**

:50:15 **not part of the same symbol.**

:50:21 **This comes right from the patent. So to repeat**
:50:23 **the flow and to see what the patent says, these are quotes**
:50:27 **from the patent, three parallel bits expanded to four, and**
:50:35 **those four identify a pair of subsets, and that**
:50:40 **2N-dimensional channel symbol is generated by having the**
:50:44 **trellis encoder identify, interdependently, those subsets.**

:50:50 **Now, I could go through and explain exactly how**
:50:52 **that works. But I don't think it is necessary, because they**
:50:55 **don't really deny this. They don't deny this in this case.**
:51:00 **That one expansion was used to generate all of the signal**
:51:05 **points of the symbol. And you see in the quote in red where**
:51:08 **it says the 2N-dimensional channel symbol is generated by**
:51:11 **having the trellis encoder identify the N subsets. What**
:51:14 **that is saying is, however many signal points are in this**
:51:18 **symbol, this one expansion of the trellis encoder is going**
:51:21 **to identify them.**

:51:28 **And again, I show an example from the prior art,**
:51:32 **the '656 patent, which is in the record, teaches exactly the**
:51:35 **same thing as the patent in this regard. There is**
:51:39 **absolutely nothing contrary in the record.**

:51:48 **Now, one example is, you know, the Rembrandt**
:51:51 **team says, well, this multi-dimensional symbol was pioneered**
:51:57 **by a fellow named Li Fang Wei at Bell Labs. The inventor's**
:52:02 **deposition said, oh, yes, we were trying to use the Wei**

symbol.

So we explained in great detail in our opening brief that the Wei paper says you generate my multi-dimensional symbol using one expansion, and there is nothing contradictory from them. Even the Wei paper itself says that's how you make one of these symbols. That's the distinguishing characteristic of a symbol that has more than one signal point from signal points that are not part of the same symbol.

Now, what's the benefit of creating signal points that are part of the same symbol as opposed to signal points that are not part of the same symbol?

Well, the inventors start by telling you what they think the benefit is. This is the first two paragraphs of the patent. What the inventors say here is, the invention relates to the transmission of data over band-limited channels. What they are saying is, I don't have a lot of bandwidths, so I need to really maximize the efficiency of what I want to do, of how I am going to transmit information. The very next paragraph of the patent is, "Over the years, the need to send data over these band-limited channels have resulted in inventions."

One of those inventions, the last thing highlighted in yellow, is the multi-dimensional signal constellation. What the inventor is saying is I am using

:53:31 **one of these multi-dimensional symbols, I am using a symbol**
:53:34 **with more than one signal point, because I need to achieve**
:53:39 **the efficiencies associated with that.**
:53:41 **Well, what are those efficiencies?**
:53:46 **On the next slide, Wei himself tells you, this**
:53:50 **is the seminal paper that Rembrandt has referred to, it's**
:53:53 **also cited in the patent, he says, "Using one of these**
:53:57 **multi-dimensional symbols reduces the number of redundant**
:54:02 **bits."**
:54:02 **Now, you remember earlier Mr. Sweeney explained**
:54:05 **how the trellis encoders add redundant bits. Those are not**
:54:09 **information. They are just there for error. So you want to**
:54:12 **send as few of those as you can because you are not**
:54:15 **transmitting information when you transmit those. So what**
:54:17 **Wei said is, if you use one of these symbols that have more**
:54:21 **than one symbol point, you get to send less redundant bits.**
:54:25 **And the reason for that, Your Honor, is because there are**
:54:28 **less expansions, so you are adding less bits.**
:54:32 **At the top I show an example of sending two**
:54:36 **signal points as part of two different symbols. And because**
:54:40 **they are not part of the same symbol, they require two**
:54:42 **expansions. So they require two expansion bits. That's**
:54:46 **overhead.**
:54:48 **At the bottom is what Wei was referring to,**
:54:50 **which is, if you use a single symbol that has more than one**

:54:55 **signal point, you only need one expansion, so you only have**
:54:58 **the one expansion bit.**
:55:01 **That's the very advantage that the inventor**
:55:03 **started the patent with by saying they are relying on.**
:55:07 **Our construction embraces not just the intrinsic**
:55:12 **evidence, with regard to how these symbols are generated,**
:55:15 **and all of the prior art and all of the testimony in this**
:55:17 **case with respect to how they are generated, but also the**
:55:20 **very advantage that the inventor said they were relying on**
:55:23 **about these symbols. Rembrandt's construction ignores all**
:55:28 **of this.**
:55:39 **So let's talk for a minute about Rembrandt's**
:55:42 **construction. It has essentially two components, which is,**
:55:50 **they start with, there are signal points that relate to a**
:55:54 **group of bits that is treated as a unit. Now, that**
:55:59 **treated-as-a-unit concept, as I said, is nowhere to be found**
:56:03 **in the '627. It's nowhere to be found in any of the**
:56:06 **intrinsic evidence. It is nowhere to be found in any of the**
:56:09 **extrinsic evidence. It is not in the Wei paper. It is**
:56:13 **nowhere. And it doesn't even have a definite meaning. How**
:56:16 **do I know if something is being treated as a unit or not?**
:56:22 **The next aspect of their construction is what**
:56:25 **has been treated as a unit is an encoding system. Well,**
:56:29 **again, encoding system does not appear in the '627 patent or**
:56:33 **in any intrinsic evidence or in any extrinsic evidence or in**

:56:37 **any prior art. In fact, their construction doesn't even**
:56:40 **require it to be treated as a unit by a trellis encoder.**
:56:45 **They insist it is an encoding system. They are walking away**
:56:47 **not just from the patent, but the whole idea that it has to**
:56:51 **be the trellis encoder.**
:56:52 **This is completely fanciful.**
:57:10 **Throughout this whole case up to this point they**
:57:13 **have cited to one piece of evidence which I have shown up**
:57:16 **here on Slide 31.**
:57:19 **Now, this is in their opening brief, but, of**
:57:21 **course, it doesn't say treated as a unit and it doesn't say**
:57:24 **encoding system. The quotes they rely on actually say our**
:57:30 **construction. If we look at the words, it's parallel bits**
:57:33 **which are used by the trellis encoder to identify the**
:57:38 **2N-dimensional channel symbol. Those same examples, as I**
:57:42 **show on Slide 32, in that same basic passage, from the**
:57:47 **bottom of Column 2 to Column 3, which is the only thing they**
:57:50 **have cited, not just supports our construction, but has two**
:57:53 **examples, both with one expansion. There is nothing -- I**
:58:02 **can't say it any differently. It is a completely fanciful**
:58:05 **construction, unsupported by anything.**
:58:10 **Here is another critical problem with their**
:58:12 **construction. It is not just that it is unsupported, but**
:58:14 **there is no way to figure out whether you are using the**
:58:18 **invention because you are interleaving two signal points**

:58:22 **from the same symbol or whether your interleaving two signal**
:58:25 **points that are not part of the same symbol. So I show up**
:58:28 **here an example.**
:58:31 **I have two bits go in and expand it to three,**
:58:35 **and select one signal point. I have two bits go in in**
:58:40 **parallel next and select a different signal point. Are**
:58:44 **those two signal points part of the same symbol or not under**
:58:47 **their construction? I know the way those skilled in the art**
:58:51 **understand it, and under our construction they are not,**
:58:53 **because they were generated by two different expansions.**
:58:56 **Under theirs, there is no way to tell, well, was that**
:58:59 **treated as a unit or not? This is critically important to**
:59:03 **this claim, because the whole invention is interleaving**
:59:06 **signal points that are part of the same symbol.**
:59:09 **So it's a meaningless construction because there**
:59:13 **is no way to actually tell whether those two signal points**
:59:17 **are part of the same symbol point or not.**
:59:19 **I show another example here, with the red**
:59:24 **serial-to-parallel converter. Suppose the**
:59:25 **serial-to-parallel converter takes in four serial bits and**
:59:31 **converts them into parallel bits, and sends them to do**
:59:35 **different trellis encoders. Well, is the serial-to-parallel**
:59:39 **converter part of the, quote-unquote, encoding system? Did**
:59:43 **they treat it as a unit? There is no way to tell. If the**
:59:46 **answer is yes, then you have the same symbol is generated by**

:59:51 **two different trellis encoders, which even they say cannot**
:59:54 **be.**
:00:03 **Finally, they don't say it exactly this way, but**
:00:07 **they make a statement in their brief where they say -- I**
:00:10 **think Mr. Sweeney might have said something like this this**
:00:13 **morning. They say, "Neither the specification nor the**
:00:16 **claims provide any limit on the number of expansions."**
:00:19 **So it indicates they recognize there has to be**
:00:22 **expansions but there is no limit on the number. I mean, as**
:00:26 **I try to whittle this down, that seems to be what they are**
:00:29 **trying to say.**
:00:31 **But there is no support anywhere for this one or**
:00:34 **more concept, if that is what they are trying to say.**
:00:37 **Nothing.**
:00:38 **The '627 has repeated examples of one expansion.**
:00:41 **We have cited to many prior art references which teach one**
:00:45 **expansion. And they have cited absolutely nothing to the**
:00:47 **contrary.**
:00:53 **With that I will move on to the distributed**
:00:56 **Viterbi decoder term, Your Honor.**
:01:00 **The real issue here is what is this distributed**
:01:08 **Viterbi decoder that recovers information.**
:01:12 **Now, we will see that the Viterbi decoder really**
:01:16 **has two basic functions, both of which are embraced by our**
:01:21 **construction and both of which are ignored by theirs.**

:01:25 **So this is the essence of our construction. The**
:01:28 **distributed Viterbi decoder has to have multiple stages, as**
:01:31 **is shown on the right and is disclosed in the patent, and**
:01:36 **that those stages have to decode the signal points that were**
:01:42 **generated by the corresponding trellis encoder stage.**
:01:53 **Multiple stage decoder, it comes right from the**
:01:57 **patent. A distributed Viterbi decoder comprised of decoder**
:02:01 **stages. It's right from the patent. There is nothing in**
:02:05 **the patent that ever says otherwise. That is very**
:02:07 **important, Your Honor, because -- and Rembrandt's own briefs**
:02:11 **say this. The Viterbi decoder stages correspond to the**
:02:16 **trellis encoder stages. So the symbols that are generated**
:02:18 **by the corresponding trellis encoder stage are decoded by**
:02:22 **the corresponding Viterbi decoder stage.**
:02:26 **Mr. Sweeney said this morning that the patent**
:02:28 **says something about, oh, well, you can implement this in**
:02:31 **software. We agree. We don't dispute that. But if you**
:02:34 **implement it in software, you have to implement it such that**
:02:37 **it has stages. You can't say, well, it's implemented in**
:02:41 **software and so that vitiates what the thing is.**
:02:44 **We are not disputing it can be implemented in**
:02:46 **software. But if it is, it has to be implemented in such a**
:02:49 **way that it has stages.**
:02:54 **Now, what does each stage do? Each stage**
:02:58 **decodes together the signal points that were generated**

:03:02 **together by its corresponding trellis encoder. And I show**
:03:07 **why this is here on Slide 43. The patent says that when the**
:03:12 **trellis encoders generate the signal points of a symbol,**
:03:15 **they select them interdependently. That is consistent with**
:03:18 **the one expansion construction. They are selected**
:03:21 **interdependently. Well, if they are generated**
:03:25 **interdependently, then the single points must necessarily be**
:03:29 **decoded interdependently. And the patent teaches that they**
:03:35 **get decoded together. Rembrandt doesn't dispute again that**
:03:39 **that is the preferred embodiment.**
:03:40 **So what I show here is the two signal points**
:03:45 **that were generated interdependently get decoded**
:03:48 **interdependently. I just changed it to the Greek**
:03:52 **nomenclature that is used in the patent because there is a**
:03:54 **quote from the patent that exactly says, two go in together,**
:03:59 **two go in together, two go in together, just as shown here.**
:04:03 **And again, Rembrandt doesn't dispute that that is the**
:04:06 **preferred embodiment. They just say, again, with no other**
:04:09 **embodiment, it doesn't have to work that way.**
:04:14 **What they have said is, well, we have a -- Mr.**
:04:22 **Sweeney didn't say it this morning, but they said it in**
:04:25 **their brief, so I want to address it now. What they said**
:04:28 **is, yes, the embodiments work that way, but what we did was,**
:04:32 **the patentee has put a quote in as a disclaimer that said**
:04:35 **even though we say that you decode these signal points**

:04:38 **interdependently, you don't have to do it that way. That's**
:04:40 **what they say in their brief.**
:04:42 **This is the quote that they rely on. They**
:04:44 **highlight this language. "Without having received all of**
:04:46 **the signal points" -- this is their highlighted language, in**
:04:50 **bold italics -- "one must rely on the so-called raw sliced**
:04:53 **values, which is less accurate."**
:04:55 **What they are trying to imply to the Court is,**
:04:57 **this is a teaching that you could decode them**
:04:59 **interdependently still, it just wouldn't be as good. But**
:05:03 **that's not what this passage says.**
:05:05 **I have highlighted what they didn't highlight,**
:05:08 **which is, "Without having received all of the signal points,**
:05:11 **one cannot take advantage of the accumulated path metric**
:05:14 **information."**
:05:17 **Now, Mr. Sweeney put up a slide this morning,**
:05:22 **No. 26. Remember, he showed this, and he said, this is an**
:05:37 **example of the way the Viterbi decoder works, and he**
:05:41 **described these as the paths, and he said, the Viterbi**
:05:44 **decoder tries to figure out what the right path is. He used**
:05:48 **the Viterbi decoder following these paths several times.**
:05:52 **Well, that is the path metric. That is what a**
:05:55 **Viterbi decoder does. If you are not following the path the**
:05:58 **way Mr. Sweeney showed the Viterbi decoder works, then you**
:06:03 **are not doing Viterbi decoding.**

:06:06 **So when the patent is telling you if you don't have all the signal points you can't take advantage of the accumulated path metric, it is telling you, you can't do Viterbi decoding. You can do something else, that is called the raw slice method.**

:06:27 **It is not just Mr. Sweeney saying that that is what the Viterbi decoder does, by the way, Your Honor. The patent itself says it, at Column 8, Lines 42 through 44. It says, "The Viterbi decoder makes a decision as to the identity of that channel symbol by using the minimum accumulated path metric." The patent is saying it. So when it says if you don't have all the signal points you can't do that, it is saying, you can't do Viterbi decoding then.**

:06:55 **And it's not just Mr. Sweeney and the patent, it is the prior art, too. I have shown Mr. Betts's own prior art '625 that you have heard about this morning, which shows the inside of a Viterbi decoder. And you see right there in the middle, as element 70, as the path metric. That is what Viterbi decoders do.**

:07:15 **So again, the bottom line here is, when the patent said, if you don't have all the signal points, you cannot use the path metric, it is telling you, that is not Viterbi decoding. You are going to have to do something else.**

:07:31 **And Rembrandt's own erroneous construction notes**

:07:35 **that when the claims say Viterbi decoder, it means something**
:07:38 **that is doing Viterbi decoding.**
:07:43 **So finally, receiver apparatus. And the main**
:07:47 **dispute with respect to receiver apparatus is, you have a**
:07:53 **box that receives a signal. Well, which part of the box is**
:07:56 **the receiver apparatus? That's the essence of the dispute**
:08:01 **on this term. I have put up our construction. And on Slide**
:08:08 **54 I have just cited to the intrinsic evidence, which**
:08:12 **teaches our construction. This comes right from the patent.**
:08:17 **On Slide 54, though -- 55 I think is the essence**
:08:21 **of the dispute on this term, which is that Rembrandt's**
:08:27 **construction does not limit the receiver apparatus to the**
:08:28 **portion of that device that decodes the received signal.**
:08:33 **But that's not consistent with the intrinsic evidence.**
:08:37 **The patent says twice that the receiver**
:08:39 **apparatus is the section of the modem which processes it and**
:08:45 **decodes it. It is not the whole modem. It is just the**
:08:48 **section that receives it and decodes it. Under their**
:08:51 **construction it would be the whole modem, or it could be the**
:08:53 **whole modem. And that contradicts the intrinsic record.**
:08:58 **So what did Mr. Sweeney show you? He showed you**
:09:01 **a definition from a dictionary. Now, he didn't show you the**
:09:05 **other definitions from that same dictionary, which are**
:09:08 **consistent with the intrinsic record. So he showed you one,**
:09:11 **any device which receives a transmission signal. He didn't**

:09:14 **show you the other definitions from that same dictionary,**
:09:19 **like No. 2, which is it's the portion of the device which**
:09:23 **decodes the encoded signal. That's the construction that's**
:09:27 **consistent with the intrinsic record.**
:09:30 **THE COURT: Thank you, counsel.**
:09:34 **MR. BENYACAR: Thank you.**
:09:35 **MR. SWEENEY: Your Honor, could we take about**
:09:37 **three or four minutes with rebuttal? I don't know that I**
:09:39 **have a lengthy rebuttal. If we take five minutes now, I**
:09:47 **could probably finish before 1:00, well before 1:00.**
:09:49 **THE COURT: I would certainly think well before**
:09:51 **1:00 would be appropriate. I am going to try to push it**
:09:55 **back from 1:00.**
:09:55 **MR. SWEENEY: If I can get five minutes, I will**
:09:58 **guarantee I will finish by quarter of.**
:10:00 **THE COURT: Good enough. We will take a short**
:10:02 **break.**
:10:02 **(Recess taken.)**
:19:01 **THE COURT: All right. Please be seated.**
:19:03 **Mr. Sweeney.**
:19:03 **MR. SWEENEY: Yes. Could we go back to our**
:19:06 **Slide 52, just to orient us.**
:19:12 **Let's start with the dimensionality issue. If**
:19:16 **we could go to the summary of the invention of the patent,**
:19:25 **Column 2.**

:19:36 **The top of Column 2, Line 5. I think you got**
:19:40 **the wrong patent.**
:19:44 **Well, while he is getting that I will just**
:19:50 **continue.**
:19:51 **It is true that the summary of the invention in**
:19:53 **this patent says that in accordance with the present**
:19:57 **invention, it has been realized that the Viterbi decoder**
:20:00 **performance in a data communication system using**
:20:02 **2N-dimensional channel symbols can be further enhanced.**
:20:06 **That is true. That was the context of what the**
:20:08 **inventors did that worked. And this 2N-dimensional scheme**
:20:13 **is in accordance with the invention. But it is not the**
:20:16 **limit of the invention. It is not the definition of the**
:20:18 **invention. And this phrase, 2N-dimensional, is in many of**
:20:23 **the claims. But it is not in other claims. And the other**
:20:27 **claims claim the interleaving of multiple signal point**
:20:31 **channel symbols broadly. And there should be no limitation**
:20:35 **to the claim based upon something in the specification.**
:20:38 **This is a description of the preferred**
:20:41 **embodiment. Even the general case described is a**
:20:44 **description of the preferred embodiment. And the patent**
:20:47 **goes on to say, as we discussed earlier, that the invention**
:20:53 **can be used with any dimensionality. And it's very specific**
:20:59 **that it can be.**
:21:00 **Now, it was mentioned, I think Mr. Reines**

:21:04 **mentioned that, well, you do have to have at least two**
:21:07 **signal points in a channel symbol. Otherwise, you have**
:21:11 **nothing to interleave. That's true. But there is no reason**
:21:16 **each of those signal points can't be one dimensional. And**
:21:20 **if they are, in talking about the channel symbol they**
:21:23 **formed, they would be two-dimensional. It would be a**
:21:26 **two-dimensional channel symbol. But there is no requirement**
:21:30 **to define the signal point as being two-dimensional.**
:21:35 **The channel symbol, the thing with the**
:21:37 **two-signal-point form, I think have to have a minimum**
:21:42 **dimensionality of two because you could have two single**
:21:45 **dimensional signal points. But just because this is the**
:21:48 **context of the invention and how the invention was**
:21:51 **discovered doesn't mean the claims are limited. The**
:21:55 **attorney who wrote the patent application knew how to**
:21:58 **require 2N dimensionality when he wanted to. He claimed it**
:22:02 **very specifically. He obviously intended not to limit**
:22:05 **certain claims to that, but to claim the invention more**
:22:08 **broadly because the invention works more broadly and solves**
:22:11 **the problem of burst error more broadly.**
:22:17 **Let's go to Slide 62. This is the Viterbi**
:22:35 **decoder. It is the difference between processes that we**
:22:38 **talk about and AOP talking about distributed discrete**
:22:44 **Viterbi decoders.**
:22:46 **I believe I heard Mr. Benyacar concede that the**

:22:51 **specification discloses that you could do this Viterbi**
:22:54 **decoding in software. And that's exactly what we are saying**
:22:57 **by our construction of decoding processes. And how the**
:23:04 **process is carried out is described in great detail in the**
:23:07 **specification, and the software would perform those same**
:23:10 **functions.**
:23:12 **So I think, perhaps, we have resolved that**
:23:15 **dispute based upon what I heard Mr. Benyacar say.**
:23:19 **Let's go to Slide 65, is the next term.**
:23:35 **This has to do with whether or not the decoding**
:23:40 **process can begin before all of the disability signal points**
:23:48 **are retrieved. Mr. Benyacar was talking about that.**
:23:53 **If we could go to that Viterbi diagram. Page**
:24:15 **26. Then there is a little animation afterwards.**
:24:24 **Maybe I will use the clip just for a second on**
:24:27 **this one.**
:24:31 **If we go back to the beginning of this so we can**
:24:33 **see the animation. If we stop it right there.**
:24:42 **As you see in this Viterbi decoding process,**
:24:46 **there is information gathered at each stage of the process,**
:24:51 **even after just receiving one signal. And errors are**
:24:59 **computed. And then more errors are computed at the next**
:25:03 **stage of the process.**
:25:05 **Before we get to the end, we can begin to**
:25:08 **eliminate -- that is the way Viterbi worked -- certain paths**

:25:15 **so we don't have to consider them anymore. Certain paths**
:25:18 **eliminate themselves before the end of the process. That is**
:25:21 **why certain lines here, for instance, this is on Page 24,**
:25:25 **the gray paths have already been eliminated as too many**
:25:31 **errors.**
:25:35 **So although you can wait for all the signals and**
:25:38 **you have the maximum amount of information, and you can do**
:25:41 **it perfectly at the end after you have all the signal**
:25:44 **points, the system is intended to try to make the best of**
:25:47 **the situation even if you don't get all the signal points.**
:25:51 **You could begin to make intermediate decisions**
:25:55 **and they are absolutely necessary to combat burst error,**
:25:58 **because, the whole purpose of this patent is to be able to**
:26:04 **decode an image or a signal even if you don't receive all**
:26:07 **the signal points. The patent does mention that, as Mr.**
:26:13 **Benyacar said. And it's not as good. It's better to**
:26:15 **receive all the signal points. That is a wonderful**
:26:18 **situation. But the patent provides a way to provide a good**
:26:21 **image even when it doesn't.**
:26:30 **We can go back to the claims.**
:26:36 **Let's go to Page 68, Slide 68. This is the**
:26:47 **expansion issue. We say a set of two or more trellis**
:26:52 **encoded signal points that correspond to a group of bits**
:26:57 **that is treated as a unit. In fact, what is shown in the**
:27:00 **patent is two concatenated signal points, two signal points**

that are treated as a channel symbol. They don't really form a channel symbol until they get out of the trellis encoder. But the trellis encoder does treat these two signal points as a unit. And that's exactly what the patent shows. And the encoding system does refer to a trellis encoding system. But there is no -- the patent does talk about an expansion of one bit. But to say two or more signal points all selected using the same group of parallel input bits as expanded once by a trellis encoder adds a very specific limitation.

There was one example of that in the patent. It was prefaced, this is in Column 3, Line 60 to 66, by "for example in this case," and there is simply no reason to read that language to construe the claim.

And it is going to be a confusing statement. What does that mean, exactly, parallel input bits as expanded once?

The point of this claim term is two signal points or maybe more than two signal points will be treated together, will be treated together, and encoded together.

I think that would be our definition, would be the most -- it is accurate. It is not unduly limited.

THE COURT: Is there some combination of the two that might work, taking on Mr. Reines's point, I think, about the one-time expansion?

:28:39 **MR. SWEENEY: Well, I think we could say two or more signal points all selected using the same -- well, we could maybe say as expanded by a trellis encoder. Perhaps that would be accurate.**

:28:57 **THE COURT: Okay. Just a thought.**

:29:04 **MR. SWEENEY: Let's go to Slide 71. That is the adjacency point. I think there is, with respect to the infringement issues, I have no theories of infringement at this point. We are looking at the patent claims.**

:29:22 **THE COURT: Oh, sure you do, Mr. Sweeney.**

:29:24 **MR. SWEENEY: I don't have the documents yet. They know their system a lot better than I do. But I am concerned about this idea of them using the invention, everything is to be interleaved and end up nonadjacent, all these signal points, and they are going to tell me, oh, they were never actually stood in line together adjacent to one another on the transmit side. They were all generated successively or they were generated at the same time.**

:29:51 **I think that would be an unfair restriction on the claims, to require that the signal points be adjacent.**

:29:57 **It's true, that's the way they are in the patent, in the preferred embodiment. But as the patent says, that is for pedagogic clarity, so you can line these things up. But there may be more clever ways to end up with an interleave system. We had that movie theater little**

:30:13 **example to show. You don't have to be, you know, standing**
:30:16 **in line adjacent to one another to be interleaved and end up**
:30:21 **nonadjacent.**
:30:22 **And the claim, you know, was very specific in**
:30:24 **requiring the system, when the signal points end up, they**
:30:27 **are nonadjacent. But it's also very clear that the claim**
:30:30 **doesn't say the signal points start out as adjacent. They**
:30:34 **didn't put that word in there for a reason. Because the**
:30:37 **spirit of the invention is broader than the pedagogically**
:30:43 **clear example in the patent.**
:30:46 **So we don't think it would be proper to insert**
:30:48 **this term in.**
:30:51 **Now, the other thing I wanted to mention, this**
:30:55 **goes to a number of Mr. Reines's points, if we turn to Page**
:31:00 **72, which is the next page, just to get this page, we happen**
:31:03 **to have the claim here, throughout Mr. Reines's**
:31:08 **presentation, he seemed to want to ignore one of these**
:31:11 **interleaving steps. He said, we only have to deal with the**
:31:15 **signal points of each channel symbol being nonadjacent**
:31:18 **because this other limitation in the claim that the symbol**
:31:22 **points of the adjacent symbols of any one of said channel**
:31:25 **streams are nonadjacent, well, we knew that. That was in**
:31:28 **the other earlier Betts patent, that particular element.**
:31:30 **That is not a good argument, because this claim**
:31:33 **incorporates both. It is a combination of both. Both are**

:31:36 **required to achieve the result of this patent. And you have**
:31:39 **to look at this whole claim together and not piece it out.**
:31:44 **Therefore, it is a valid criticism that their**
:31:48 **construction does not recognize, their construction on the**
:31:52 **transmit side or the receive side does not recognize that**
:31:56 **signal points of adjacent symbols must be interleaved as**
:32:00 **well.**
:32:01 **It is no answer to say, well, that element**
:32:04 **mentioned somewhere, we are not going to have to even worry**
:32:06 **about that. That's really just dissembling, I think.**
:32:24 **We see that flaw again if we go to Slide 80.**
:32:33 **"Separating the adjacent signal points of each generated**
:32:38 **trellis signals using other signal points," that does not**
:32:42 **accomplish what these claims require, as I mentioned. That**
:32:46 **does not accomplish having interleaving, not just with**
:32:50 **respect to signal points in channel symbols, but signal**
:32:52 **points in adjacent channel symbols.**
:33:03 **There is no adequate response, also, to what**
:33:06 **happens if we have three or four or five signal points in a**
:33:10 **channel symbol, as depicted on Page 81, where 1 and 4 are**
:33:16 **clearly not adjacent to one another. And they clearly have**
:33:20 **to be interleaved.**
:33:43 **Let's go to, before we get to the**
:33:46 **means-plus-function claims, let me say a brief word on the**
:33:54 **receiver apparatus.**

:34:09 **If we could go to Page 97 just so we see the**
:34:13 **competing constructions. I don't think there is any doubt**
:34:16 **that the receiver apparatus is a device that receives a**
:34:19 **transmission signal. I think that should be clear.**
:34:22 **Now, if we go to the next page, we -- well,**
:34:30 **let's see if we can find it.**
:34:32 **Let's go to Page 101. You see how the receiver**
:34:38 **apparatus is used in the claim. This requirement they want**
:34:41 **to put in to demodulate the receive signal, that would be**
:34:45 **okay if the claim didn't already say that. It says, for**
:34:49 **recovering the information from a received stream of trellis**
:34:51 **encoded signal points.**
:34:52 **My point is, they are simply introducing -- they**
:34:55 **are saying that twice, but they are saying it twice with a**
:34:57 **little bit of a tweak, because they put something that is**
:34:59 **not in the claim. They say a serial bit stream. I think,**
:35:03 **if you read the claim, a receiver apparatus that receives a**
:35:06 **signal, and then the claim goes on, plain meaning, for**
:35:09 **recovering information from a received stream of trellis**
:35:13 **encoded signal points. That means, that implies**
:35:16 **demodulation. And it is a lot easier to understand, and we**
:35:19 **don't have to say it twice.**
:35:59 **Let's go to Page 106, one of the**
:36:05 **means-plus-function claims. Again, here, AOP's construction**
:36:09 **wants to only talk about the interleaver 341. That won't**

:36:14 **accomplish what the claims require. You have to interleave**
:36:17 **the signal points of the channel symbols and also signal**
:36:22 **points of the adjacent channel symbols. And you need the**
:36:27 **switch to do that, or some type of programming to do that.**
:36:34 **Their answer is, we are just going to read out**
:36:37 **of the claim the last part of it, that says the signal**
:36:40 **points in successive adjacent channel symbols have to be**
:36:45 **done. That was also in an earlier patent. That is not**
:36:49 **right. You have to show the structure for the whole claim,**
:36:51 **including that requirement as well. That is part of this**
:36:53 **patent.**
:37:21 **If we could go to Page 102, this is the means**
:37:26 **for generating the plurality of streams of trellis encoded**
:37:31 **channel symbols.**
:37:33 **The structure there, they do refer to the**
:37:35 **parallel trellis encoders, and an encoder that generates**
:37:39 **signal points. But it's clear that the trellis encoders and**
:37:44 **encoder are shown. But the patent is also clear that**
:37:48 **software can be used. And as far as the algorithm, it's**
:37:53 **described. This is a method that's described. And the**
:37:57 **software would simply mimic the method that is described and**
:38:04 **the generation of these trellis encoded channel symbols.**
:38:13 **I think that alternative way of doing it should**
:38:15 **not be simply ignored. It's in the patent specification.**
:38:19 **It's stated quite clearly, in a fairly sizable paragraph.**

:38:27 **We did ask their expert about that. I think he**
:38:30 **agreed that one of ordinary skill in the art would know how**
:38:34 **to implement these in software.**
:38:37 **So let me just check my notes, Your Honor, and I**
:38:41 **think I will be finished.**
:38:42 **THE COURT: Okay.**
:39:04 **MR. SWEENEY: Okay, Your Honor. Thanks.**
:39:06 **THE COURT: Brief reply.**
:39:08 **MR. REINES: Thank you, Your Honor. First, on**
:39:10 **the question of whether plaintiffs have an infringement**
:39:13 **theory, they have been clear throughout that they are**
:39:15 **arguing the '627 is essentially to have digital television**
:39:19 **operate under the ATFC standards, and that their charts and**
:39:23 **everything read right on the standard and their claim is**
:39:26 **it's essential and that's what you need to know. So the**
:39:28 **argument that this claim construction is contorting the**
:39:31 **patent this way and that way aren't directed at trying to**
:39:34 **capture infringement isn't something that should be accepted**
:39:37 **without scrutiny.**
:39:39 **On the specifics, let's start first on signal**
:39:42 **point. I think the one point I would make on that is, the**
:39:46 **argument is that that first section of the summary of the**
:39:49 **invention, first sentence is preferred embodiment. That was**
:39:51 **the argument. That is really talking about the -- as**
:39:56 **explained, the first one says in accordance with the**

:39:57 **invention. The second two say in the preferred embodiment,**
:40:00 **in the preferred embodiment.**
:40:01 **So the drafter of the patent, the logic of the**
:40:03 **patent, where they wanted to say these are optional**
:40:06 **features, they marked it as such. It is the first few words**
:40:08 **of each of the three paragraphs.**
:40:11 **I think all the other arguments I made are**
:40:13 **unrebutted essentially, that the only thing shown is a**
:40:15 **two-dimensional, the familiar graph for the signal point.**
:40:20 **On adjacency, the constant reference to the**
:40:22 **movie theater, with people scrambling in and out of a movie**
:40:26 **theater, it's that kind of abstract thinking that ignores**
:40:28 **the logic of their own patent. The issue is: What's the**
:40:31 **problem? Everyone knows when you start this process you**
:40:33 **have to think of the problem. The problem that was clearly**
:40:36 **defined in the patent over and over again is that, in the**
:40:39 **words of the patent, the signal points of each channel**
:40:42 **symbol operated on by a particular trellis encoder stage are**
:40:46 **adjacent in the output signal point stream.**
:40:49 **So the problem is, when you use the Betts patent**
:40:52 **and you are just doing that simple interleaving, you have**
:40:55 **the signal points within each symbol still together and you**
:40:59 **have to undo that. That's not just arguments from**
:41:02 **defendants. That's what the patent law says, when the Court**
:41:05 **reviews again the briefs and the citations that we have**

made.

So it's not people scrambling in or bits scrambling into the single point interleaver. It is the ordered introduction of symbols that happen to have their signal points adjacent. That is the problem that the whole patent is directed at. So the nonadjacency flows from that.

This point about dissembling, when I made the point that there is two things that have to happen in that signal point interleaver, in Figure 3, I think it's 341 over there, first you have to take -- you are going to be receiving all these symbols with the two signal points adjacent. You need to undo that and render those nonadjacent.

The second thing that you need to do is don't mess up the fact that the symbols have been interleaved. And it doesn't say you have to cause adjacency. It says you interleave the signal points in such a way. By signal point interleaving, it is not referring to symbol interleaving, by its very character. Symbol point interleaving is happening upstream.

When you read the claim, the logic of it holds together. I think the way to make the point is, all we are asking the Court to recognize is the single points within the symbols are adjacent. We are not asking to say anything else has to be -- signal points from adjacent symbols don't

:42:21 **have to be adjacent. We are not arguing about that. The**
:42:23 **only thing we are asking the Court to recognize is that**
:42:26 **which is true, which is that the signal points within the**
:42:29 **symbols are adjacent.**
:42:32 **THE COURT: All right.**
:42:35 **MR. BENYACAR: 30 seconds, Your Honor.**
:42:38 **When Mr. Sweeney put up in the context of the**
:42:42 **Viterbi decoder the Viterbi path and he showed, stepping**
:42:46 **through the path, and he said, you don't need all the signal**
:42:49 **points in order to step through the path, that was technical**
:42:53 **testimony which is wrong, and it directly contradicts what**
:42:58 **the patent says, which says that you do need all the signal**
:43:02 **points to implement the path metric. There is nothing in**
:43:07 **the record which supports what Mr. Sweeney just testified**
:43:09 **to, and it directly contradicts what the patent says.**
:43:12 **On trellis encoded channel symbol, he again said**
:43:15 **the patent says that this is an example. Just two quick**
:43:19 **comments. It is every example in the patent. It is every**
:43:23 **example in the record. And the reason why that example said**
:43:25 **"for example" is because it was saying, for example, three**
:43:27 **bits to four. It's not limited to three bits to four. It**
:43:31 **could be five bits to six, eight bits to nine.**
:43:33 **The point is, though, it is one expansion. It**
:43:36 **is only example because it's three bits to four.**
:43:39 **Finally, on receiver apparatus, it is not**

:43:41 duplicative to say the receiver apparatus is the component
:43:44 which does the decoding, because what they are trying to do
:43:48 is say, well, sure, there is a component in the modem that
:43:52 does the decoding, but you can also look at the whole modem
:43:55 as doing the decoding. You can even look at the whole
:43:59 building in which the modem is housed as doing the decoding.
:44:03 And they are trying to cover all of that, when
:44:05 the patent is very clear that it is only the component that
:44:07 does the decoding, that is the receiver apparatus. And
:44:10 that's why it is important.
:44:13 Thank you.
:44:14 THE COURT: Thank you, counsel.
:44:14 Obviously, I will take this under advisement.
:44:16 I am curious as to whether you were able to
:44:18 bridge your differences as to the confidentiality agreement.
:44:23 MR. SEITZ: Your Honor, I believe there is a
:44:25 call scheduled for later today. It is obviously a big
:44:28 undertaking, with so many counsel involved, to schedule even
:44:31 a call. I think they have got one scheduled, or are trying
:44:34 to schedule one for today.
:44:37 On a final point, I don't want to go into
:44:39 substance because I told the Kirkland & Ellis lawyers that
:44:42 we would not be talking about the schedule, but the parties
:44:44 are conferring about, not affecting the trial date, but
:44:48 possibly giving us a little more slack because we have

:44:50 **gotten a little behind because of the protective order**
:44:52 **issues.**
:44:53 **So I just wanted to alert the Court that we are**
:44:55 **going to try and maybe reach a stipulation.**
:44:57 **THE COURT: Why have you gotten behind with**
:44:59 **regard to the protective order issues?**
:45:01 **MR. SEITZ: There are confidentiality orders,**
:45:04 **Your Honor, dealing with source code and things like that**
:45:07 **and limitations on reviewing source code. Again --**
:45:11 **THE COURT: Mr. Seitz, that is the last thing I**
:45:13 **want to hear -- this isn't just directed at you -- that**
:45:16 **there is a failure to agree on confidentiality that is going**
:45:18 **to hold up anything in this case. That shouldn't be. We at**
:45:25 **least have Rule 26(b)(1), which provides for production for**
:45:32 **attorneys' eyes only.**
:45:34 **MR. SEITZ: It does. I think one of the**
:45:35 **problems is there are third parties involved, and then they**
:45:39 **say, well, without an agreed-upon protective order in the**
:45:41 **case, we are reluctant to produce source code.**
:45:44 **THE COURT: They have got a rule of court that**
:45:48 **is at least as good as a confidentiality agreement. That**
:45:52 **needs to be referenced to these third parties and made**
:45:55 **clear, because I am not going to look very kindly upon a**
:45:59 **delay that results from something like this. Other types of**
:46:03 **delay, okay, that are reasonable.**

:46:05 **I don't view this as a reasonable basis for doing anything.**

:46:08 **MR. SEITZ: Again, I did not want to jump into it because I told --**

:46:12 **THE COURT: I don't want you to breach your agreement. I am just giving you some general guidance, some general guidance to everyone here that that is my view.**

:46:20 **Anything else we should talk about today?**

:46:23 **Okay, counsel. Thank you.**

:46:23 **(Hearing concluded at 12:48 p.m.)**

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:46:23 **Reporter: Kevin Maurer**